C4687-1

THE MAGAZINE FOR GROWING COMPANIES

Inc.®

DEC. 1984
$3.00

"EXCELLENT" QUESTIONS BY TOM PETERS

THE INC. 500 Honoring America's fastest-growing private companies

THE ONE-MINUTE LENDER Saying no to small companies has never been easier

0 74820 08478 12

CONTENTS

180 *Going through Customs: Rules for selling to the Japanese*

51 *The 1984 INC. 500: America's fastest-growing private companies*

142 *Working the Line: The owners of Cairo Terminal talk trains.*

7 **FYI**
Number crunching and knowledge curves

10 **Letters**
Legal education; report on The Report; two views on Vector Graphic

Speaking out

12 **The hole truth about capital**
Between big companies and small start-ups stretches the Grand Canyon of capital formation.

21 **People & innovations**
Computing with light; a tale of robbers, hackers, and spies; improving TV reception; the soul of a new entrepreneur

37 **News & trends**
Happy hour; fortune cookie say, you will find gold; whipping out a passport for computer sales; the cost of house calls

The 1984 INC. 500

51 **Honoring America's fastest-growing private companies**

52 **Inside the INC. 500**
By Curtis Hartman
The class of 1984 is the youngest, the fastest-growing—and by far the most productive—in the history of the ranking.

54 **Index of companies on the INC. 500**

60 **The cleanup crew**
By Curtis Hartman
"We're not just building a business, we're collecting entrepreneurs."

66 **Beyond growth**
By Bruce G. Posner
When revenues soar, the smart CEO keeps an eye on the bottom line.

72 **Private lives**
Profiles from the INC. 500

85 **Flow charts**
By William Souder
Some companies are carried up on a rising tide; others buck the industry trends.

94 **Whatever happened to the class of '83?**
Fifteen companies were acquired, 14 went public, 2 went under.

107 **The INC. 500 charts**

142 **Working the line**
By John F. Persinos
Cairo Terminal Railroad's owners aren't train buffs. They get their kicks by making money.

150 **The one-minute lender**
By Bruce G. Posner
Bankers, tired of poring over tedious loan applications? Cheer up—help is on the way.

COPYRIGHT © 1984 BY INC. PUBLISHING CORPORATION All rights reserved. Editorial and executive offices at 38 Commercial Wharf, Boston, MA 02110. INC. (ISSN 0162-8968) is published monthly by Inc. Publishing Corporation, 1642 Westwood Blvd., Los Angeles, CA 90024. Subscription rate for U.S. and Possessions, 12 issues $24. All subscription correspondence should be addressed to INC. magazine, P.O. Box 2538, Boulder, CO 80322. Please allow at least six weeks for change of address. Include your old address as well as new, and enclose if possible an address label from a recent issue. Second class postage paid at Los Angeles, Calif., and additional mailing offices. Postage paid at Mississauga, Ontario. POSTMASTER: Send address changes to INC. magazine, P.O. Box 2538, Boulder, CO 80322. Material in this publication must not be stored or reproduced in any form without permission. Requests for permission should be directed to Permissions Coordinator, INC., 38 Commercial Wharf, Boston, MA 02110. Inc. is a registered trademark of Inc. Publishing Corporation.

Andrée Abécassis

155 *An Excellent Question: Tom Peters gives some answers.*

Michael White

150 *One-Minute Lender: A new way to analyze a company's health*

155 **An excellent question**
By Tom Peters
The author of *In Search of Excellence* answers the 10 questions most frequently asked about his book.

169 **Entrepreneurs can do everything government can do, only better. Or can they?**
By Eugene Linden
By the time he got to Phoenix, Chuck Walbridge had discovered the pitfalls, as well as the promise, of privatization.

180 **Going through customs**
By Joel Kotkin
Americans are selling the Japanese everything from shampoo to catering trucks. The trick is to play by their rules.

208 **Ideas you can use**
Party policy; bell ringers for big sales; junior officers; throwing names in the air; big name hunting

Selling & marketing
214 **Name your price**
Buyers shop at Lenny Mattioli's stores as much for the bargaining as for the bargains.

Financial tactics
220 **Play money**
Some companies are earning high returns on their idle cash—and living to regret it.

Capital
230 **Borrowing for teddy bears**
For one maker of stuffed animals, the way to the peaceable kingdom was on the back of a "low floater."

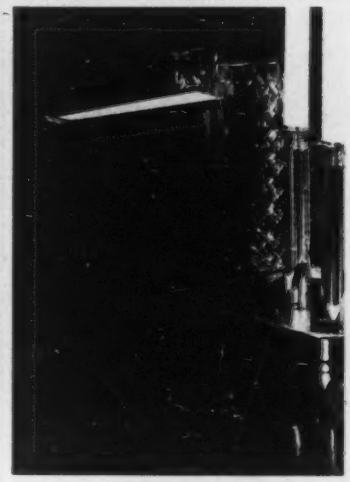
234 **Investing in growth companies/Street talk**
What goes up must come down—but why so fast?

237 **Your money**
William Brennan on tax shelters; so you want to sell your company

Cover
Photo by Walter Bibikow
Sculpture by Nicholas Fasciano

"Intelligent, Comprehensive, and Useful."

George Gilder
author
Wealth and Poverty



"...an excellent compilation of information on the entire field."

Henry Bloch
founder, H&R Block

Entrepreneurship
by Robert Ronstadt

New concepts, case histories, and resource information critical for practicing entrepreneurs or anyone who wants to become one.

Available only from Lord Publishing, Glen Street, Dover, MA 02030 or telephone (617) 785-1621 or 785-1575. Visa and Mastercharge accepted. Note card expiration date. $29.50 plus $3.00 shipping (770 pgs.) (Mass. residents add $1.50 sales tax.) or send for detailed brochure.

Circle No. 196 on Reader Service Card.

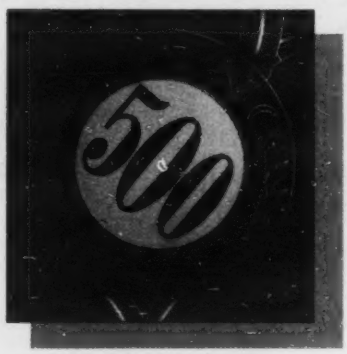
Honoring America's fastest-growing private companies

THE 1984 INC. 500

They are the pacesetters of America's reborn economy: 500 companies with $5.7 billion in sales, a 992% growth rate, and a 402% increase in employment over the past five years. But the members of our third annual INC. 500 are more than the fastest-growing privately held companies in America. Beyond the numbers, each company represents an opportunity seized, men and women with the imagination and vision to embark on what Dick Dotts, chief executive officer of 1984's #1 company, Pedus International, calls "the rocky voyage to growth."

In the report that follows, INC. has tried to chart some of the currents and shoals along that journey. We explored the changing face of the companies on the list—the youngest, fastest-growing, and most productive of the past three years (see page 52). We looked at the acquisition strategy Dotts used to take Pedus from $383,000 in sales in 1979 to $60.5 million in 1983 (see page 60); and we charted the growth routes of 10 other men and women, from a world-class mountaineer turned retailer to a former fashion model turned medical recruiter (see page 72). We examined what happens when CEOs decide that growth is not enough—that as their companies change, their own course must change as well (see page 66). We looked at the mix of problems and opportunities facing a growing company in a growing industry like computers, and at those facing a company in a slow-moving industry like homebuilding (see page 85).

Finally, we explored the fate of last year's INC. 500—the class of 1983—and learned what happened to four individual entrepreneurs who fell from the list (see page 94).



Turbulent, chancy, exhilarating—the voyage to growth requires courage and daring. But those who have been on it say it is a trip not to be missed.

INSIDE THE INC. 500

The class of '84 is the youngest, the fastest-growing–and by far the most productive– in the history of the ranking.

BY CURTIS HARTMAN

It was a time for good news. After the worst recession in a decade, the long-awaited recovery had finally come to pass. Inflation and unemployment were down; housing starts, consumer spending, and industrial output were up. The IPO market boomed, raising a record $12.6 billion for 888 new issues. After four years of decline, corporate profits made a stunning comeback, and Wall Street celebrated with a broad bull market that pushed prices to historical highs.

Not that all of 1983's news brought jubilation. A record 612,000 new business incorporations was matched by a record 31,334 business failures, including the demise of Osborne Computer Corp., the bankruptcy of Baldwin-United Corp., and the default of the First National Bank of Midland, the second-worst bank collapse in American history. While retailers, automakers, and real estate companies rebounded sharply, the video-game business entered a downward spiral, the airlines continued their deregulated bloodletting, and imports continued to eat away at the moribund American steel industry. The dollar kept climbing, but so did American trade deficits. Interest rates came down, but the prime stayed at double digits. While the recovery remained strong, the black cloud of the federal deficit loomed on the horizon.

Yet for all the uncertainties, it was an upbeat year. And the 1984 INC. 500 companies, along with thousands of other dynamic businesses like them, were the leaders of the national turnaround.

The INC. 500 lists the fastest-growing privately held companies in the United States, ranked by percentage increase in sales from fiscal 1979 through fiscal 1983. As a group, this year's companies have seen meteoric expansion: a 992% increase in sales over the five-year period. In 1979, sales for the 500 companies totaled only $521.9 million; the average company generated slightly more than $1 million, and only 19 topped the $5-million mark. In 1983, however, sales for the 500 came to almost $5.7 billion; the average volume was $11.4 million, and more than half exceeded the $5-million mark. Twenty companies climbed to more than $50 million, and 4 topped $100 million. The sales leader—Gemcraft Homes Inc. (#19)—hit $228 million.

The diversity of the 500 testifies to the wide range of opportunities open to the entrepreneur, from CEO Stanley Hermens's air taxi service, Hermens Air Inc. (#487), to CEO Len Ganote's Hawaiian Pacific Elevator Corp. (#133). Some reflect the passions of world-class athletes like marathoner Bill Rodgers, co-founder of Bill Rodgers & Co. (#93), a maker of running gear; or of amateurs like C. R. "Duke" Duclos, a golfer who designed a new putter to improve his game and went on to build Slotline Golf (#339).

The INC. 500 are primarily young companies. All but 49 were created since 1970, over half from 1977 to '79. A date of origin can be deceptive, however. The oldest company on the list—N. Chasen & Son (#213), founded in 1914—has become a new business since the leadership torch passed from father to son. Irvin Chasen is still the CEO, but his 29-year-old son Jeff has turned the steady $1-million-a-year painting contractor into a $12-million office-furnishing operation.

Company founders, in 90% of the cases, have held on to the reins of the businesses they started, continuing to serve as CEO today. They have held on to their equity as well: 153 of the CEOs hold all of their companies' stock, and 43% hold at least half. Of the 130 with less than a controlling interest, all but 39 share in at least a quarter of the company. Only 5 CEOs—including Dick Dotts, founder of #1 Pedus International (see page 60)—hold no equity whatsoever.

Almost four out of five of the INC. 500 companies have relied exclusively on internal growth. Of the 113 who made acquisitions, most were in the service sector, and most acquired only one or two similar operations. The Windham Co. (#273), a Pensacola, Fla.-based owner/manager of hotels, motels, and condominiums, is the list's acquisition leader, with 21 different purchases (and four sales) over the past four years; Windham often buys properties at foreclosure, then renovates them for eventual resale.

THE INC. 500 AT A GLANCE

NO. OF COMPANIES BY INDUSTRY			
Manufacturing	156		
Wholesale	77		
Retail	34		
Service	205		
Construction	28		
TOTAL SALES IN 1983 ($MIL.)	$5,698.7		
TOTAL SALES IN 1979 ($MIL.)	521.9		
Percent change (1979–83)	992%		
AVG. SALES IN 1983 ($MIL.)	$11.4		
AVG. SALES IN 1979	1.0		
AVG. SALES PER EMPLOYEE, 1983	$97,239		
AVG. SALES PER EMPLOYEE, 1979	44,727		
Percent change (1979–83)	117%		
COMPOUND AVG. ANN. SALES GROWTH (1979–83)			
Total	81.78%		
Range	51.89%–254.58%		
Median	76.15%		
NO. OPERATING AT A PROFIT	463		
16% or more	34	1%–5%	248
11%–15%	49	Breakeven	11
6%–10%	132	Loss	26

Over the past five years, 175 companies have seen earnings grow, 117 have seen their earnings drop, and 208 have stayed the same.

TOTAL NO. OF EMPLOYEES			
1983	58,605		
1979	11,668		
Percent increase	402.27%		
AVG. NO. OF EMPLOYEES			
1983	117.2		
1979	23.3		
YEAR FOUNDED			
Before 1960	12	1975	36
1960–70	37	1976	63
1971	9	1977	100
1972	19	1978	103
1973	15	1979	84
1974	22		
FOUNDER IS CEO	448		
CEO EQUITY			
100%	153	25%–49.9%	91
90%–99.9%	29	1%–24.9%	34
51%–89.9%	116	0%	5
50%	69	NA	3
NO. ACQUIRING OTHER COMPANIES (1979–83)	113		

All but a handful of the INC. 500 ended fiscal 1983 with a healthy bottom line: 463 of the companies were profitable, including 34 that earned 16% or more of sales. Another 49 companies recorded profits between 11% and 15% of sales, 132 from 6% to 10%, and 248 from 1% to 5%. Over the five-year period from 1979 through 1983, 175 companies saw their earnings grow, 117 saw an earnings drop, and 208 stayed the same. Ninety-two companies reported losses in 1979; in 1983, only 26 were in the red.

The ability of the INC. 500 to generate new jobs is as impressive as their growth in sales. Employment at the 500 companies has increased 402.3% in the past five years, up from 11,668 to 58,605. The average company ended 1983 with 117 employees, 94 of them hired in the past five years. Employment leader Pedus International ended 1983 with 6,000 workers on the payroll, 5,923 hired since 1979.

Besides adding new workers, the 500 have also made their employees significantly more productive. Average sales per employee at an INC. 500 company stand at $97,239, up from $44,727 five years ago, an increase of 117%. Almost one-third of the companies on the list have seen productivity increases of more than 200%, and nine have seen increases of more than 1,000%. Enconi Inc. (#5), a San Jose, Calif., manufacturer and distributor of computer peripherals, boasts an increase of 2,511% in productivity, up to $265,304 from $10,162 five years ago—in part, Enconi CEO Ken Kapur explains, because the company shifted from nuclear consulting to peripherals, and in part "because our employees own the company, so they work harder."

This year's INC. 500 is the magazine's third annual compilation of the nation's fastest-growing private companies. And although every year's list has certain obvious similarities, there are some notable differences between 1984's winners and those of previous years. Companies on the current list are the youngest in the history of the ranking. They are also the most productive and the fastest-growing—but their profits have dropped for the second consecutive year.

Increased productivity is the most dramatic change in the INC. 500 since the list's beginning. While the average company on the 1984 list is only slightly larger than last year, employing 117 rather than 115, each worker is responsible for 56% more in sales ($97,239) than last year's $62,467, and 59% more than the $61,167 of the class of '82. This year also marks the first time that the INC. 500 companies have outperformed *Fortune* 500 companies in sales per employee; the latter averaged $92,226 in 1983.

The companies on this year's list have also grown the fastest of any group since the ranking began. The average company on the current list has grown from roughly $1 million to $11.4 million in sales over five years, an increase of 992%. The average company on last year's list had gone from $1 million to $8.8 million, an increase of 770%. For 1982, the increase was 571%. Ten companies on the 1982 and '83 lists had a growth rate over 5,000%; there were 20 this year. In 1982, one company was over 10,000%; in 1983 there were two; in 1984 there are five.

That increased growth rate has intensified the competition for a place on the list. This year the cut-off line for membership was 432% sales growth, up from last year's 397% and 1982's 235%. Of the almost 300 companies from last year's list that failed to return, over half continued to grow, but no longer fast enough to qualify, including 12 that recorded sales growth of more than 400%. Of the 208 companies that did return, only 55 climbed in their ranking. Sixty-three companies placed on the list three years running—but only 2, Sage Systems Inc. (#284) and Creative Management Systems Inc. (#85) have seen their rankings climb.

While the 1984 INC. 500 companies recorded faster growth than their 1983 counterparts, profitability slipped slightly for the second year in a row. This year's list includes only 83 companies recording profits of 11% or more of sales; last year's boasted 122. This year's list has 26 companies that ended the year with a loss; last year's had only 18. While this year's list has 8 fewer companies reporting a five-year drop in earnings, it also has 9 fewer companies with a five-year increase.

There have been changes in industry representation. There are more service companies this year, 205 compared with last year's 172, and more wholesalers, 77 compared with last year's 59. But there are less than half as many retailers, down to 34 from 73, and fewer manufacturers, down to 156 from 168. The largest increase has been in business and financial consultants, up to 35 from 22 last year, followed by real estate companies, up to 14 from 8. The largest decrease was in transportation companies, down to 15 from 27 last year, and food companies, down to 12 from 19. Industrial equipment and supplies, with 62 companies, and computer and related products, with 48, are the two largest categories.

There have been geographical changes as well. With 86 companies on this year's 500, California continues to dominate, followed by Texas with 38, Virginia with 32, New York with 31, and Florida and Ohio, each with 26. But California also recorded the largest drop in companies on the list, losing 14. Colorado lost 8, New York and Maryland lost 6, Massachusetts, Florida, and Wisconsin each lost 5. Virginia added the most, with 13 more companies on the list than last year, followed by Ohio with 10.

Where will the members of the 1984 INC. 500 go from here? As the recovery continues, most will keep on growing; already, in fact, 437 of the 500 report further employment increases since year-end, including 35 companies that have doubled their payroll. But the history of the rankings shows that few will be able to sustain the stunning growth rate that put them on the list. Some will go public. Others will be acquired. And a few will go under. But although many of the names and numbers on next year's list will certainly be different, small-business growth leaders like the INC. 500 will continue to fuel the nation's economic engine. □

TOP 10 PERFORMERS: TOTAL SALES

Rank	Company (INC. 500 rank)	1983 sales ($000)
1.	Gemcraft Homes (19)	$228,310
2.	Le Beacon Pressé (212)	158,000
3.	Continental Ozark (165)	154,634
4.	Chioke International (72)	117,203
5.	Forever Living Products (209)	90,400
6.	Louisiana Energy & Development (138)	77,396
7.	Harvin C. Moore (246)	74,924
8.	International Medical Centers (183)	72,620
9.	Travel Center (315)	72,304
10.	Mark III Industries (148)	71,449

TOP 10 PERFORMERS: SALES PER EMPLOYEE

Rank	Company (No. of employees)	Sales per employee
1.	Chioke International (10)	$11,720,300
2.	Continental Ozark (19)	8,138,632
3.	Ugly Duckling Rent-A-Car Syst. (12)	3,125,000
4.	Investor Life Services (24)	2,518,083
5.	Miami Printing & Publishing (6)	1,773,667
6.	Majestic Steel Service (25)	1,681,878
7.	Brady Marketing (15)	1,403,333
8.	Duncan Oil (20)	1,175,863
9.	Marshall Lewis & Associates (11)	1,130,410
10.	LaMarca Group (23)	1,108,348

TOP 10 PERFORMERS EMPLOYMENT GROWTH

Rank	Company (No. of employees)	New employees 1979-83	Percent growth
1.	Pedus International (6,000)	5,923	7692%
2.	Solectron (1,500)	1,440	2400
3.	National Health Care (1,476)	1,418	2445
4.	Hall Real Estate Group (1,653)	933	130
5.	Healthcare Int'l. (1,700)	900	113
6.	Inmed (875)	850	3,400
7.	Advanced Technology (1,149)	819	248
8.	Syst. & Applied Sciences (850)	650	325
9.	Commonwealth Savings (757)	621	457
10.	Gemcraft Homes (621)	590	1,903

THE INC. 500 INDEX

(3) ABC SUPPLY
Beloit, WI

(161) ATCOM
Durham, NC

(97) ACTION PACKETS
Ocala, FL

(410) AD-TEX ENGINEERING SERVICES Santa Ana, CA

(99) ADMINISTRATIVE INFORMATION SYSTEMS Bridgewater, NJ

(449) ADVANCED CIRCUIT TECHNOLOGY Nashua, NH

(406) ADVANCED COMPUTER COMMUN. Santa Barbara, CA

(49) ADVANCED INFORMATION MANAGEMENT Boston, MA

(348) ADVANCED SYSTEM APPLICATIONS Bloomingdale, IL

(432) ADVANCED TECHNOLOGY
Reston, VA

(174) AERO DATA METAL CRAFTERS
Bohemia, NY

(112) AERO PRODUCTS
Longwood, FL

(397) ALACON
Sunnyvale, CA

(55) ALAMO LEARNING SYSTEMS
Walnut Creek, CA

(459) ALIMAR ET CIE
Scottsdale, AZ

(257) ALLAR-TIC
San Diego, CA

(359) ALLEGRO SERVICES
Tucker, GA

(90) ALLENBACH INDUSTRIES
Carlsbad, CA

(44) ALLIANCE RESEARCH
Chatsworth, CA

(435) ALLIED TIRE SALES
Altamonte Springs, FL

(475) ALLTEST
Palatine, IL

(73) ALOETTE COSMETICS
Malvern, PA

(251) ALOPEX INDUSTRIES
San Marcos, CA

(287) ALTUS
San Jose, CA

(274) ALUCHEM
Cincinnati, OH

(479) AMERICAN AGRISURANCE
Council Bluffs, IA

(58) AMERICAN DIRECT RESPONSE
Ralston, NE

(32) AMERICAN LEISURE INDUSTRIES Lanham, MD

(46) AMERICAN LIST COUNSEL
Princeton, NJ

(403) AMERICAN PASSAGE MARKETING Seattle, WA

(247) AMERICAN TECHNICAL SERVICES Tucker, GA

(305) AMPLICON
Santa Ana, CA

(461) AQUIDNECK DATA
Middletown, RI

(399) ARCON
Stewartville, MN

(16) ARGOSY ELECTRONICS
Edina, MN

(440) ASSOCIATED IMAGES
Minneapolis, MN

(390) ASSOCIATED PACKAGING
Goodlettsville, TN

(437) ASTRO AUTOMOTIVE
Denver, CO

(283) ATTRIDGE HEATING & COOLING Tempe, AZ

(194) AUDIO COMMAND SYSTEMS
Rockville Center, NY

(401) AVTEC INDUSTRIES
Fairfield, NJ

(196) B. W. LEVY SECURITY CONSULTANTS Chicago, IL

(355) BEI HOLDINGS
Atlanta, GA

(157) BAKER COMMUNICATIONS
Houston, TX

(467) BAKER CONCRETE CONSTRUCTION Hamilton, OH

(293) BAKER INSTALLATIONS
Pittsburgh, PA

(82) BASIC COMPUTER
Akron, OH

(214) BEST CHOICE
Hershey, PA

(113) BIESEMEYER MANUFACTURING Mesa, AZ

(29) BILL RODGERS & CO.
Weymouth, MA

(207) BLAGGE ENTERPRISES
Rancho Cordova, CA

(342) BOOTH ORGANIZATION
Rockville, MD

(248) BOSTON ACOUSTICS
Peabody, MA

(377) BRAD CABLE ELECTRONICS
Schenectady, NY

(220) BRADY MARKETING
Concord, CA

(436) BROOKS INTERNATIONAL
Miami, FL

(158) BROUGHER INTERNATIONAL
Greenwood, IN

(280) BRUCE W. EBERLE & ASSOCIATES Vienna, VA

(497) BRUM & ANDERSON PUBLIC RELATIONS Minneapolis, MN

(121) BURDICK'S COMPUTER STORES Overland Park, KS

(143) BYTE SHOPS NORTHWEST
Portland, OR

(126) CEI
Londonderry, NH

(307) CEM
Indian Trail, NC

(375) CTEC
Sacramento, CA

(490) CABLEVISION INDUSTRIES
Liberty, NY

(45) CAL-PAC ROOFING
Laguna Hills, CA

(335) CAMPMOR
Paramus, NJ

(107) CARBIDE TECHNOLOGIES
Fraser, MI

(147) CARL BEAVERS JR. CONSTRUCTION Searcy, AR

(134) CENTRAC ASSOCIATES
Seattle, WA

(122) CENTRAL DATA
Champaign, IL

(199) CENTRAL MASS MEDIA
Worcester, MA

(223) CHAMPION TROPHY
Memphis, TN

(72) CHIOKE INTERNATIONAL
New York, NY

(173) CHUPCH INSURANCE CONSULTANT W. Des Moines, IA

(411) CIBCOA
Northbrook, IL

(374) CISCO ELECTRICAL SUPPLY
Columbus, OH

(443) COLLIER-JACKSON
Tampa, FL

(152) COLUMBIA WOODWORKING
Washington, DC

(114) COMDESIGN
Goleta, CA

(205) COMARK
Glendale Heights, IL

(23) COMMTEK
Hailey, ID

(25) COMMERCIAL & INDUSTRIAL ADMIN. Santa Clara, CA

(75) COMMONWEALTH MORTGAGE
Boston, MA

(52) COMMONWEALTH SAVINGS ASSOCIATION Houston, TX

(188) COMP FAST
Hudson, NH

(253) COMPENDIUM SYSTEMS
New York, NY

(18) COMPUTER ALLIANCE
Farmington Hills, MI

(452) COMPUTER AVIONICS
Mt. Carmel, IL

(81) COMPUTER DYNAMICS
Virginia Beach, VA

(140) COMPUTER HARDWARE SALES
Atlanta, GA

(446) COMPUTER MAINTENANCE
Secaucus, NJ

(351) COMPUTER SCIENCE PRESS
Rockville, MD

(116) COMPUTERLAND OF SAN FRANCISCO San Francisco, CA

(431) COMSEARCH
Reston, VA

(136) COMSEL
Vienna, VA

(145) COMTEX INFORMATION SYSTEMS New York, NY

(86) CONDOR D.C. POWER SUPPLIES Camarillo, CA

(160) CONNECTICUT RADIO NETWORK Hamden, CT

(219) CONQUEST ASSOCIATES
Tarzana, CA

(297) CONSERVATREE PAPER
San Francisco, CA

(94) CONSOLIDATED GROUP
Framingham, MA

(337) CONSTRUCTION SYSTEMS ASSOCIATES Marietta, GA

(177) CONTEXTURAL DESIGN
Raleigh, NC

(165) CONTINENTAL OZARK
Fayetteville, AR

(464) CONTRACT FURNISHINGS & SYSTEMS New York, NY

(309) COOPER CONSULTANTS
Portland, OR

(131) CORBY INDUSTRIES
Lehigh Valley, PA

(334) CORMED
Medina, NY

(482) CORP. CONSULTING & DEVEL.
Research Triangle Park, NC

(474) CORPOREX COS.
Fort Wright, KY

(298) CRAFCO
Chandler, AZ

(85) CREATIVE MANAGEMENT SYSTEMS McLean, VA

(6) CREATIVE OUTPUT
Milford, CT

(226) CREATIVE RESOURCES
Oklahoma City, OK

(327) CREEL MORRELL
Houston, TX

(221) CUSTOM VAN OF UTAH
Salt Lake City, UT

(448) D & D SERVICES
Phenix City, AL

(336) D P ENTERPRISES
Seattle, WA

(279) DLS INDUSTRIES
Minnetonka, MN

(24) DALSAT
Plano, TX

(35) DATASTORE ASSOCIATES
Vienna, VA

(156) DATABANK
Phoenix, AZ

(494) DAYTON EXTRUDED PLASTICS
Springboro, OH

(69) DECKER SUPPLY
Madison, WI

(425) DELTA BUSINESS SYSTEMS
Orlando, FL

(175) DEN-MAT
Santa Maria, CA

(204) DEST
Milpitas, CA

(333) DEUCALION RESOURCES GROUP Ann Arbor, MI

(234) DILITHIUM PRESS
Beaverton, OR

(200) DIVERSIFIED SYSTEMS
Indianapolis, IN

(272) DORMAN BOGDONOFF
Andover, MA

(33) DOW INDUSTRIES
Culver City, CA

(316) DR. CULLY'S CARTAGE
Hunt Valley, MD

(430) DRUG EMPORIUM
Worthington, OH

(330) DUNCAN OIL
Xenia, OH

(323) DYNAMIC SYSTEMS
McLean, VA

(191) E & A INDUSTRIES
Indianapolis, IN

(343) ETM ELECTROMATIC
Palo Alto, CA

(267) EASTERN DENTAL CENTERS
Avenel, NJ

(367) EASTWAY DELIVERY SERVICE
Houston, TX

(450) EASY LIVING
Indianapolis, IN

(229) ECONOMY RESTAURANT EQUIPMENT Orlando, FL

(167) EDO HELMS
Miami, FL

(405) EFFECTIVE MANAGEMENT SYSTEMS Milwaukee, WI

(292) ELCOMP SYSTEMS
Pittsburgh, PA

(326) ELECTRO MECHANICAL DESIGN Gaithersburg, MD

(26) ELLA CONTRACTING
Houston, TX

(192) ELLIOTT STORE FIXTURES
Lansing, MI

(149) ELOGRAPHICS
Oak Ridge, TN

(127) EMPIRE AIRWAYS
Hayden Lake, ID

(5) ENCOM
San Jose, CA

(389) ENDLESS VACATION SYSTEMS
Indianapolis, IN

(420) ENVIRONMENTAL MARKETING GROUP Boca Raton, FL

(416) ENVIRONMENTAL RESOURCES MANAGEMENT W. Chester, PA

(318) EQUITRAC
Coral Gables, FL

(466) ERECTION SPECIALTIES
Canton, MA

(325) ESSEX GRAIN PRODUCTS
King of Prussia, PA

(398) ETERNA-LINE
Boise, ID

(433) EURO REP
Tustin, CA

(197) EXECUTONE TELECOMMUNICATIONS Reading, PA

(124) EXECUTONE OF CENTRAL FLORIDA Ft. Lauderdale, FL

(141) EXECUTONE OF WESTERN MASS. Worcester, MA

(179) FKM COPIER PRODUCTS
Irvine, CA

(28) FASTEC INDUSTRIAL
Elkhart, IN

(20) FIFTH SEASON TRAVEL
Indianapolis, IN

(302) FINALS, THE
New York, NY

(260) FINANCIAL ASSOCIATES
Overland Park, KS

(178) FISHER GRAPHIC INDUSTRIES
Modesto, CA

(102) FISHER INSURANCE GROUP
Memphis, TN

(338) FLEXIBLE PACKAGING
Hayward, CA

(227) FLORIDA AZALEA SPECIALISTS
Ruskin, FL

(209) FOREVER LIVING PRODUCTS
Phoenix, AZ

(130) FORMSTORE
Fenton, MO

(368) FORTUNA
Cambridge, MA

(11) FOUR WINDS RENTAL
San Juan, PR

(286) FUTURA COATINGS
St. Louis, MO

(106) G & H TRANSPORTATION
Houston, TX

(282) GAHTS
Virginia Beach, VA

(150) GNP LOUDSPEAKERS
Pasadena, CA

(500) GPA TECHNICAL CONSULTANTS Cincinnati, OH

(404) GAREY CONSTRUCTION
Austin, TX

(163) GARTNER GROUP
Stamford, CT

(19) GEMCRAFT HOMES
Houston, TX

(65) GEMINI RESEARCH
Fremont, CA

(462) GENERAL ALUM & CHEMICAL
Toledo, OH

(255) GENERAL COMMUNICATIONS
Denver, CO

(8) GENERAL MICRO
South Bend, IN

(386) GENESEE STAMPINGS
Arlington, TX

(216) GENIE FILTER
Dansville, NY

(376) GEO-CENTERS
Newton Upper Falls, MA

(418) GILA MEDICAL SERVICES
Claypool, AZ

(329) GOAL SYSTEMS INTERNATIONAL Columbus, OH

(332) GOLDEN GATE, REALTORS
Pittsburgh, PA

(453) GORDON S. BLACK
Rochester, NY

(384) GRAPHCO
Cleveland, OH

(117) GREAT LAKES MICROGRAPHICS Kalamazoo, MI

(95) GULF STATES MORTGAGE
Atlanta, GA

(388) HHB-SOFTRON
Mahwah, NJ

(104) HSC ENGINEERING
Towson, MD

(128) HALL REAL ESTATE GROUP
Dallas, TX

(206) HAMLEY-WOOD
Washington, DC

(417) HARMONY FOODS
Santa Cruz, CA

(120) HARPER & BUZINEC ARCHITECTS Coral Cables, FL

(246) HARVIN C. MOORE
Houston, TX

(133) HAWAIIAN PACIFIC ELEVATOR
Honolulu, HI

(9) HAYES MICROCOMPUTER PRODUCTS Norcross, GA

(444) HEALTHCARE INTERNATIONAL
Austin, TX

(372) HERITAGE INSURANCE ASSOC.
Lancaster, PA

(487) HERMENS AIR
St. Marys, AK

(166) HEURIKON
Madison, WI

(77) HIATT AGENCY
Miamisburg, OH

(473) HIDDEN VILLA RANCH
Placentia, CA

(159) HILL INTERNATIONAL
Willingboro, NJ

(91) HOLM INDUSTRIES
Scottsburg, IN

(164) HOMEFINDERS RENTALS
Oakland, CA

(151) HONOLULU PREMIUM PRODUCTS Honolulu, HI

(319) HOUSTON ART GLASS ENTERPRISES Houston, TX

(215) IMI SYSTEMS
New York, NY

(409) IPL
Bell, CA

(202) IMAGE STREAM
Los Angeles, CA

(369) IMAHARA & KEEP
Sunnyvale, CA

(93) INSPEECH
King of Prussia, PA

(491) INCEPTA
Dallas, TX

(303) INDIANA RECORDS MANAGERS
Indianapolis, IN

(171) INFORMATION BUILDERS
New York, NY

(74) INFOTEC DEVELOPMENT
Costa Mesa, CA

(125) INMED
Norcross, GA

(31) INSTITUTIONAL FINANCING SERVICES Benicia, CA

(96) INSULATION TECHNOLOGY
Niles, IL

(495) INTEGRAL SYSTEMS
Walnut Creek, CA

(87) INTERACT
Asheville, NC

(183) INTERNATIONAL MEDICAL CENTERS Miami, FL

(468) INTERNATIONAL METRIC SUPPLY Dallas, TX

(30) INTERNATIONAL ROOFING
Beloit, WI

(407) INTERTEC COMPONENTS
Longwood, FL

(379) INTERVAL INTERNATIONAL
Miami, FL

(2) INVESTOR LIFE SERVICES
Cincinnati, OH

(34) J. J. GRUNDY
Ottawa, IL

(358) JBM ELECTRONICS
Hazelwood, MO

(110) **JWI**
Holland, MI

(252) **JACKALOPE POTTERY**
Santa Fe, NM

(290) **JEFFREY MICHAEL**
Seattle, WA

(103) **JET-STER**
Rochester, WA

(198) **JEWELL BUILDING SYSTEMS**
Dallas, NC

(320) **JOHNSON & ASSOCIATES**
Chicago, IL

(239) **KAMEX**
Cleveland, OH

(88) **KAPPLER DISPOSABLES**
Guntersville, AL

(64) **KASSOUF PARKING**
Cleveland, OH

(281) **KELLY McK**
Woodinville, WA

(184) **KIDDER INTERNATIONAL**
Auburn, WA

(349) **KIWI FENCE SYSTEMS**
Waynesburg, PA

(414) **KLUTZ**
Palo Alto, CA

(364) **KOMFORT KOACH**
Louisville, KY

(424) **L/F TECHNOLOGIES**
Carson City, NV

(185) **LaMARCA GROUP**
New York, NY

(155) **LABELGRAPHICS**
Portland, OR

(360) **LAWSON ASSOCIATES**
Minneapolis, MN

(212) **LE BEACON PRESSE**
Seattle, WA

(365) **LEICHTUNG**
Cleveland, OH

(4) **LELAND A. WOLF & ASSOCIATES** Foster City, CA

(154) **LENDER'S SERVICE**
Pittsburgh, PA

(245) **LIGHTING HORIZONS**
Carle Place, NY

(428) **LITTLEWOOD, SHAIN**
Wayne, PA

(438) **LOST ARROW**
Ventura, CA

(138) **LOUISIANA ENERGY & DEVELOPMENT** New Orleans, LA

(439) **LUFRAN**
Macedonia, OH

(488) **MD RESOURCES**
Miami, FL

(83) **MAJESTIC STEEL SERVICE**
Cleveland, OH

(109) **MANAGEMENT CONSULTING & RESEARCH** Falls Church, VA

(176) **MANAGEMENT EMPLOYEE GROUP ADMIN.** Milwaukee, WI

(484) **MARINE STRUCTURAL APPLICATIONS** Cumfries, VA

(92) **MARIPOSA PRESS**
Benicia, CA

(148) **MARK III INDUSTRIES**
Ocala, FL

(385) **MARKATRON**
Norcross, GA

(48) **MARKDATA**
Pittston, PA

(238) **MARKETING COMMUNICATIONS** Lenexa, KS

(317) **MARSHALL LEWIS & ASSOCIATES** Santa Ana, CA

(63) **MARTIN FOREST INDUSTRIES**
Healdsburg, CA

(38) **MASTERCLEAN OF NORTH CAROLINA** Winston-Salem, NC

(98) **MAXIMA, THE**
Bethesda, MD

(84) **MAXXIMA**
Tallahassee, FL

(285) **McDONALD EQUIPMENT**
Willoughby, OH

(304) **MEDICAL COPY SERVICES**
Philadelphia, PA

(322) **MEGAS MANUFACTURING**
Cleveland, OH

(458) **MEMPHIS GLOVE**
Memphis, TN

(172) **MERIDIAN**
Falls Church, VA

(321) **MERRILL**
St. Paul, MN

(111) **METRO INFORMATION SERVICES** Virginia Beach, VA

(254) **METROCALL OF DELAWARE**
Alexandria, VA

(408) **METROWEB**
Erlanger, KY

(277) **MEXI-SNAX**
Hayward, CA

(42) **MIAMI PRINTING & PUBLISHING** Miami, FL

(250) **MICRO INDUSTRIES**
Westerville, OH

(101) **MICROMEDIA MARKETING**
Pasadena, CA

(80) **MICROSOFT**
Bellevue, WA

(7) **MICROWARE DISTRIBUTORS**
Aloha, OR

(210) **MILLER MEDICAL SERVICE**
Waterloo, IA

(469) **MILLER OIL**
Norfolk, VA

(231) **MINCRON SBC**
New York, NY

(68) **MODULITE**
Canoga Park, CA

(276) **MONEGON**
Rockville, MD

(89) **MOSS BROWN**
Alexandria, VA

(265) **MOTIVATIONAL ENTERPRISES**
Louisville, KY

(341) **MOTIVATIONAL MARKETING**
Paramus, NJ

(312) **MR. GOODBUYS**
Philadelphia, PA

(465) **N. C. O. INDUSTRIES**
Riverside, CA

(213) **N. CHASEN & SON**
Richmond, VA

(314) **NELCO**
Richmond, VA

(434) **NEOPC**
Leominster, MA

(477) **NACOM**
Columbus, OH

(144) **NADY SYSTEMS**
Oakland, CA

(445) **NATIONAL COMPUTER PRINT**
Birmingham, AL

(14) **NATIONAL HEALTH CARE AFFILIATES** Buffalo, NY

(447) **NATIONAL TITLE**
Houston, TX

(243) **NATIONAL TRADE PRODUCTIONS** Alexandria, VA

(357) **NEUTRON INDUSTRIES**
Torrance, CA

(218) **NEXUS**
Chicago, IL

(115) **NIGHT CAPS**
Milwaukee, WI

(370) **NOEL JOANNA**
Irvine, CA

(299) **NORTH AMERICAN FINANCIAL SERVICES** Davenport, IA

(41) **NORTHLAND ENVIRONMENTAL** Burbank, CA

(288) **NORWICH TOGS**
Forestdale, MA

(119) **OBERWEIS SECURITIES**
Aurora, IL

(190) **OCEAN SPECIALTY MFG.**
Canoga Park, CA

(182) **OFFICE SYSTEMS**
Charlotte, NC

(496) **OIL RECOVERY SYSTEMS**
Norwood, MA

(61) **ORACLE**
Menlo Park, CA

(421) **OSTARR COS., THE**
LaGrange, IL

(201) **OWL ELECTRONIC LABS**
Old Saybrook, CT

(324) **OXFORD SOFTWARE**
Hasbrouk Heights, NJ

(275) **P E SYSTEMS**
Alexandria, VA

(381) **PCI**
Austin, TX

(457) **PCI ENERGY SERVICES**
Lake Bluff, IL

(412) **PNS**
Racine, WI

(371) **PACIFIC ENVELOPE**
Anaheim, CA

(460) **PACIFIC TRADE GROUP**
Waipahu, HI

(263) **PADGETT-THOMPSON**
Overland Park, KS

(454) **PAR LABEL & TAPE**
Kansas City, MO

(429) **PARMED PHARMACEUTICALS**
Niagara Falls, NY

(186) **PAULSEL LUMBER**
Fort Worth, TX

(13) **PAVION**
Nyack-on-Hudson, NY

(402) **PAYDAY**
San Francisco, CA

(352) **PEAK TECHNICAL SERVICES**
Pittsburgh, PA

(1) **PEDUS INTERNATIONAL**
Los Angeles, CA

(481) **PEERLESS UMBRELLA**
New York, NY

(118) **PEPPERWOOD INT'L.**
Eugene, OR

(306) **PERENNIAL SOFTWARE SERVICES** Santa Clara, CA

(47) **PERFECT COURIER**
New York, NY

(244) **PERTRON CONTROLS**
Canoga Park, CA

(181) **PETER PIPER PIZZA**
Phoenix, AZ

(413) **PETROLEUM WELL SERVICES**
Sour Lake, TX

(108) **PIONEER/ECLIPSE**
Sparta, NC

(50) **POLYCOAT SYSTEMS**
Hudson Falls, NY

(353) **POLYCOM**
Donora, PA

(291) **PRESSURE SYSTEM**
Hampton, VA

(486) **PRETTY NEAT INDUSTRIES**
Pompano Beach, FL

(193) **PRIME RESOURCES**
Stamford, CT

(249) **PRIORITY 1 ELECTRONICS**
Chatsworth, CA

(142) **PRODUCTION MANAGEMENT**
Harvey, LA

(153) **PRODUCTIVITY TRAINING**
San Jose, CA

(493) **PROFESSIONAL BANK SERVICES** Louisville, KY

(217) **PROFILE INDUSTRIES**
Ft. Lauderdale, FL

(346) **PROFORMA**
Euclid, OH

(483) **PROTEC MANAGEMENT SYSTEMS** Lafayette, CA

(313) **PSICOR**
Brighton, MI

(78) **QUALITY HOME INSULATION**
Walnut, CA

(442) **QUALOGY**
San Jose, CA

(230) **R & B AUTOMOTIVE**
Huntingdon Valley, PA

(237) **R & E ELECTRONICS**
Wilmington, NC

(228) **R. J. MARSHALL**
Detroit, MI

(211) **RAIL**
Towson, MD

(270) **RSO**
Laurel, MD

(146) **RT/KATEK**
East Orange, NJ

(208) **R.W. ELECTRONICS**
Tewksbury, MA

(70) **RENAISSANCE PRINTING**
Detroit, MI

(36) **RENOVATOR'S SUPPLY, THE**
Millers Falls, MA

(195) **RESOURCE CONSULTANTS**
McLean, VA

(391) **RISING FAST TRUCKING**
Batesville, AR

(10) **ROBEC**
Montgomeryville, PA

(311) **ROBELLE INDUSTRIES**
Stoughton, MA

(456) **ROBERTS WELDING CONTRACTORS** Winterville, NC

(57) **ROYAL SILK**
Clifton, NJ

(56) **ROYAL WATERBEDS**
St. Louis, MO

(269) **S. J. ELECTRO SYSTEMS**
Detroit Lakes, MN

(169) **SAS INSTITUTE**
Cary, NC

(284) **SAGE SYSTEMS**
Rockville, MD

(300) **SALADALLEY RESTAURANTS**
Philadelphia, PA

(382) **SALAZAR CONSTRUCTION**
Corpus Cristi, TX

(392) **SAN ANTONIO DEVELOPERS**
San Antonio, TX

(278) **SCHLOTT REALTORS**
Fair Lawn, NJ

(361) **SCIENTIFIC CALCULATIONS**
Fishers, NY

(356) **SCIPAR**
Buffalo, NY

(489) **SEAVEX**
Boston, MA

(331) **SEKO AIR FREIGHT**
Schiller Park, IL

(189) **SELECTONE**
Hayward, CA

(15) **SEMITOOL**
Kalispell, MT

(378) **SENECA BALANCE**
Depew, NY

(366) **SETPOINT**
Houston, TX

(289) **SHARPER IMAGE, THE**
San Francisco, CA

(22) **SHELTER COMPONENTS**
Elkhart, IN

(135) **SIDMAK LABORATORIES**
East Hanover, NJ

(393) **SIEGEL-RUGGIERO DESIGN GRAPHICS** New York, NY

(383) **SIERRA GEOPHYSICS**
Redmond, WA

(51) **SIGAL CONSTRUCTION**
Washington, DC

(236) **SILLERMAN-MORROW BROADCASTING** Middletown, NY

(235) **SINBAD SWEETS**
Clovis, CA

(394) **SKYWAY FREIGHT SYSTEMS**
Santa Cruz, CA

(339) **SLOTLINE GOLF**
Huntington Beach, CA

(27) **SNAPPY CAR RENTAL**
Beachwood, OH

(380) **SOFTWARE RESULTS**
Columbus, OH

(54) **SOLECTRON**
San Jose, CA

(271) **SONIC AIR COURIER**
Los Angeles, CA

(451) **SPECTRA RESEARCH SYSTEMS**
Newport Beach, CA

(387) **SPORT GRAPHICS**
Cranston, RI

(328) **STARMARK**
Chicago, IL

(470) **STRAUB METAL SERVICE**
Bear Creek, PA

(225) **SUMMA FOUR**
Manchester, NH

(498) **SUN CIRCUITS**
Santa Clara, CA

(480) **SUN HILL INDUSTRIES**
Stamford, CT

(203) **SUNBELT DISTRIBUTORS**
Houston, TX

(492) **SUNDOWN VITAMINS**
Hollywood, FL

(310) **SUNSHINE BEAUTY SUPPLIES**
Chatsworth, CA

(471) **SUNWESTERN PROPERTIES**
Tulsa, OK

(264) **SUPPORT SYSTEMS INTERNATIONAL** Richmond, CA

(345) **SWIMEX**
Rancho Cordova, CA

(294) **SWINTEC**
East Rutherford, NJ

(259) **SYBEX**
Berkeley, CA

(426) **SYSTEMS & APPLIED SCIENCES**
Vienna, VA

(419) **SYSTEMS ARCHITECTS**
Randolph, MA

(241) **SYSTEMS COORDINATION**
Crystal River, FL

(60) **SYSTEMS, RESEARCH & APPLICATIONS** Arlington, VA

(463) **SYSTEMS STRATEGIES**
New York, NY

(427) **T J MAC DERMOTT**
Kingston, NH

(242) **TABS ASSOCIATES**
Baltimore, MD

(180) **TSR**
Lake Geneva, WI

(17) **TAURIO**
Alexandria, VA

(347) **TECHNE ELECTRONICS**
Palo Alto, CA

(422) **TECHNOLOGY CONSTRUCTORS** Denver, CO

(396) **TEX-AIDS INDUSTRIES**
Arlington Heights, IL

(478) **TELCO RESEARCH**
Nashville, TN

(240) **TELECHECK MICHIGAN**
Oak Park, MI

(441) **TELECHECK SOUTHWEST**
Houston, TX

(295) **TELECOMMUNICATIONS SPECIALISTS** Houston, TX

(71) **TESSCO**
Georgetown, TX

(170) **TESTA COMMUNICATIONS**
Carle Place, NY

(301) **TEXAS DRUG REPS**
San Antonio, TX

(67) **THACKER JEWELRY**
Roaring Springs, TX

(485) **THERMAL ENGINEERING OF ARIZONA** Tucson, AZ

(139) **THOMPSON**
Hendersonville, NC

(162) **TOOL KING**
Denver, CO

(476) **TRANSPO ELECTRONICS**
Orlando, FL

(315) **TRAVEL CENTER**
Anchorage, AK

(262) **TRI GLAS INDUSTRIES**
Daleville, AL

(233) **TRITON**
Washington, DC

(53) **TYKE INTERNATIONAL**
Pleasant Hill, CA

(232) **U. A. (UNCLE ALBERT'S)**
Hays, KS

(132) **U. S. ROBOTICS**
Chicago, IL

(268) **UAI TECHNOLOGY**
Durham, NC

(129) **UGLY DUCKLING RENT-A-CAR SYSTEM** Tucson, AZ

(79) **UNIFIED MORTGAGE**
Cupertino, CA

(499) **UNIQ DIGITAL TECHNOLOGIES**
Batavia, IL

(363) **UNITED DESIGN**
Noble, OK

(21) **UNITED PERSONAL COMPUTER** Wallingford, CT

(43) **UNIVOX CALIFORNIA**
Los Angeles, CA

(12) **VCA**
Vienna, VA

(40) **VDS**
Sacramento, CA

(137) **VANGUARD GROUPS INTERNATIONAL** Houston, TX

(362) **VANGUARD PLASTICS**
McPherson, KS

(66) **VANGUARD TECHNOLOGIES**
Fairfax, VA

(168) **VANNER**
Columbus, OH

(296) **VANTAGE COMPUTER SYSTEMS** Wethersfield, CT

(222) **VIAR**
Alexandria, VA

(105) **VIDEOLAND**
Carrollton, TX

(187) **VIRGINIA TEXTILES**
Richmond, VA

(423) **VISIBLE CHANGES**
Houston, TX

(123) **VITAL SIGNS**
Totowa, NJ

(258) **VOCATIONAL TRAINING CENTER** St. Louis, MO

(354) **W-B SUPPLY**
Pampa, TX

(39) **WALKER EXPLORATION**
Houston, TX

(76) **WEATHERVANE WINDOW**
Kirkland, WA

(415) **WEBB, MURRAY & ASSOCIATES**
La Porte, TX

(308) **WEEKLEY HOMES**
Houston, TX

(100) **WELDON ELECTRONICS**
Plymouth, MN

(373) **WESMAC COMPUTER SYSTEMS**
Paramus, NJ

(472) **WESTERN CONTROLS**
North Salt Lake, UT

(400) **WILD & WOOLY NEEDLE-CRAFTS** Falls Church, VA

(273) **WINDHAM**
Pensacola, FL

(455) **WINONA KNITTING MILLS**
Winona, MN

(344) **WORDS & DATA**
Shawnee Mission, KS

(37) **XMCO**
McLean, VA

(62) **XMR**
Santa Clara, CA

(350) **XTO**
Liverpool, NY

(261) **YANKEE GROUP**
Boston, MA

(340) **YANTIS**
San Antonio, TX

(395) **ZBR PUBLICATIONS**
Wilmington, MA

(266) **ZZYZZX TECHNOLOGIES**
Houston, TX

(256) **ZENGER MILLER**
Cupertino, CA

(224) **ZIP PRODUCTS**
Mechanicsville, VA

(59) **ZOOM TELEPHONICS**
Boston, MA

THE INC. 500

Company ('83/'82 rank) Business description	Sales growth 1979-83 Percent increase	Compound annual rate	'83 sales ($000)	'79 sales ($000)	Profit range* '83	'79	No. of employees '83	'79	Acquisitions '79-'83	Date founded
1. Pedus International Bldg. maint., security svcs.	15,707%	255%	$60,539	$383	D	F	6,000	77	4	1979
2. Investor Life Services Finan. svcs. to NYSE members	14,971	250	60,434	401	D	E	24	3	0	1979
3. ABC Supply Whisle. roofing, flooring prods.	13,972	244	14,279	101	C	D	49	1	5	1979
4. Leland A. Wolf & Associates Svcs. employee benefit plans	12,033	232	18,346	151	C	C	37	2	0	1979
5. Enconi Mfr. & dist. peripherals & software	10,343	220	10,612	102	F	A	40	10	0	1979
6. Creative Output Management systems	9,805	215	10,400	105	C	F	90	4	0	1979
7. Microware Distributors Microcomputer hardware & software	9,494	213	12,069	126	D	D	27	1	0	1979
8. General Micro Microcomputer sales & svc.	8,163	201	19,500	236	D	F	150	8	5	1978
9. Hayes Microcomputer Products (4) Mfr. software & hardware peripherals	7,875	199	50,021	627	A	A	256	40	0	1978
10. Robec Microcomputers & peripherals	7,303	193	14,068	190	D	D	39	6	0	1978
11. Four Winds Rental (8) Housing rental & sales	7,074	191	13,200	184	D	D	23	2	0	1978
12. VCA Integration & mktg. microcomputer systs.	6,927	190	8,031	114	D	D	18	2	0	1974
13. Pavion Cosmetics	6,626	186	9,950	148	C	F	145	50	0	1976
14. National Health Care Affil. (193) Owns, operates nursing homes	6,494	185	30,596	464	C	E	1,476	58	14	1977
15. Semitool Semiconductor electronic equipment	6,452	185	6,668	102	C	F	85	7	0	1979
16. Argosy Electronics Mfr. hearing aids	5,885	178	6,642	111	C	F	95	11	0	1979
17. Taurio Engineering services	5,575	174	9,055	160	D	D	150	5	1	1978
18. Computer Alliance Resale of business computing systs.	5,274	171	6,843	127	D	B	94	3	1	1979
19. Gemcraft Homes Homebuilder	5,080	168	228,310	4,407	D	D	621	31	0	1978
20. Fifth Season Travel (3) Corporate-travel planning	5,009	167	24,780	485	D	F	25	10	0	1977
21. United Personal Computer Computer retail sales	4,731	164	24,734	512	D	D	87	5	0	1977
22. Shelter Components Suppl. comp. parts to housing, RV indus.	4,496	160	29,266	637	D	F	75	5	2	1979
23. CommTek Publishing company	4,444	160	5,156	113	C	F	75	2	0	1979
24. Dalsat Systs. eng., consul., mfg. for satel. comm.	4,320	158	4,420	100	F	A	33	13	0	1978
25. Commercial & Industrial Adm. (10/16) Third-party administration	4,270	157	36,500	835	D	E	58	6	0	1976

1 25

*INC. estimate. A. 16% or more; B. 11% to 15%; C. 6% to 10%; D. 1% to 5%; E. Breakeven; F. Loss.

Company ('83/'82 rank) Business description	Sales growth 1979-83 Percent increase	Compound annual rate	'83 sales ($000)	'79 sales ($000)	Profit range* '83	'79	No. of employees '83	'79	Acquisitions '79-'83	Date founded
26. Ella Contracting Contracting: underground util. & paving	4,212	156	12,463	289	D	B	158	7	1	1978
27. Snappy Car Rental Daily car rental	4,149	155	30,382	715	B	F	500	30	0	1973
28. Fastec Industriel Whsle. distrib. hardware, related prods.	4,121	155	11,544	273	D	F	60	6	2	1979
29. Bill Rodgers & Co. Running clothing	3,992	153	6,482	158	D	F	15	3	0	1978
30. International Roofing Roofing	3,990	153	4,960	121	C	B	75	3	0	1969
31. Institutional Financing Services School & youth organization fund-raising	3,963	152	32,500	800	C	E	450	12	0	1979
32. American Leisure Industries Travel company, membership travel card	3,932	152	4,977	123	D	F	35	6	0	1978
33. Dow Industries Construction engineering	3,800	150	11,700	300	C	E	35	3	0	1972
34. J. J. Grundy Sales, install., serv. of windows/doors	3,634	147	13,778	369	D	B	295	3	1	1979
35. Datastore Associates Computer retail sales	3,591	146	6,290	170	D	F	42	6	0	1977
36. Renovator's Supply, The Mail-order brass decorative hardware	3,553	146	9,567	262	C	B	75	15	2	1978
37. XMCO Defense-oriented professional services	3,433	144	9,554	270	C	F	143	11	0	1979
38. Masterclean of North Carolina General contractor	3,375	143	3,822	110	C	C	8	2	0	1976
39. Walker Exploration Exploration, prod. of oil & gas	3,342	142	4,555	132	C	C	30	1	0	1979
40. VDS (32) Video equipment	3,290	141	25,611	755	D	D	104	21	0	1977
41. Northland Environmental Renewable energy, conservation	3,155	139	4,972	153	C	D	30	5	0	1975
42. Miami Printing & Publishing Printing brokerage	3,145	139	10,642	328	A	A	6	1	0	1979
43. Univox California (98) High-technology equipment	3,123	138	35,448	1,100	A	A	255	48	0	1970
44. Alliance Research Electronic-parts supplier	3,053	137	5,679	180	B	A	30	2	0	1978
45. Cal-Pac Roofing Specialty tile roof contractor	3,040	137	12,345	393	D	F	170	32	0	1978
46. American List Counsel Mailing-list brokerage & mgmt.	3,004	136	7,920	255	D	D	24	4	1	1978
47. Perfect Courier Courier services	2,972	135	12,655	412	C	F	350	50	4	1979
48. Markdata (12) Direct marketing	2,933	135	9,130	301	B	A	261	25	1	1977
49. Advanced Information Mgmt. Computer services	2,900	134	3,157	105	C	E	89	14	0	1978
50. Polycoat Systems (18) Insulation roofing & coating materials	2,800	132	17,400	600	C	E	20	6	2	1978
51. Sigal Construction (1) Construction mgmt. services	2745	131	32,611	1,146	D	C	70	10	0	1976
52. Commonwealth Savings (19) Financial services	2,692	130	63,434	2,272	C	C	757	136	11	1977
53. Tyke International (17) Educational toys sales	2,670	129	25,682	927	F	D	100	25	0	1977
54. Solectron Electronics mfg.	2,588	128	32,662	1,215	C	D	1500	60	0	1977
55. Alamo Learning Systems (111) Software training systems	2,575	127	4,146	155	A	C	17	2	1	1979
56. Royal Waterbeds (164) Waterbed specialty stores	2,547	127	3,891	147	C	B	100	2	0	1977
57. Royal Silk (21) Silk fashions sold via catalog	2,536	127	17,150	651	D	D	100	8	0	1978
58. American Direct Response Card deck publisher	2,478	125	3,867	150	A	A	43	3	0	1979
59. Zoom Telephonics (71) Voice/data telecomm. peripherals	2,450	125	5,859	230	C	C	40	3	0	1977
60. Systems, Research & Application Computer & mgmt. services	2,411	124	4,770	190	D	C	89	6	0	1978

500
26
60

*INC. estimate. A. 16% or more; B. 11% to 15%; C. 6% to 10%; D. 1% to 5%; E. Breakeven; F. Loss.

Company ('83/'82 rank) Business description	Sales growth 1979-83 Percent increase	Sales growth 1979-83 Compound annual rate	'83 sales ($000)	'79 sales ($000)	Profit range* '83	Profit range* '79	No. of employees '83	No. of employees '79	Acquisitions '79-'83	Date founded
61. Oracle (82) Computer software development	2,398	124	5,070	203	B	F	51	10	0	1977
62. XMR Laser systems (purchases components)	2,385	123	3,488	140	F	E	60	3	0	1979
63. Martin Forest Industries Wholesale lumber brokers	2,379	123	5,268	213	D	D	6	4	0	1979
64. Kassouf Parking (22/25) Operates parking lots	2,371	123	5,755	233	D	C	109	16	0	1972
65. Gemini Research Semiconductor process equipment	2,369	123	9,393	380	B	A	80	6	0	1979
66. Vanguard Technologies ADP systs. devel., facilities mgmt.	2,357	123	7,870	320	C	C	325	15	0	1979
67. Thacker Jewelry Mfr. jewelry, wholesale & retail	2,314	122	2,789	116	C	C	19	3	0	1979
68. Modulite (25) Mfr. modular lighting fixtures	2,277	121	7,510	316	D	D	87	18	1	1977
69. Decker Supply Highway-safety products	2,256	120	2,365	100	D	D	35	5	0	1979
70. Renaissance Printing Financial & legal sales/service centers	2,210	119	6,523	282	D	D	120	20	0	1977
71. Tessco (130) Subcont. mfr. cable & harness assemblies	2,202	119	14,054	610	D	D	248	44	1	1977
72. Chioke International (317) Export mgmt.	2,184	119	117,203	5,131	C	D	10	4	0	1970
73. Aloette Cosmetics Cosmetic direct sales via home shows	2,139	118	8,464	378	B	D	14	6	0	1978
74. Infotec Development Space systems	2,100	117	5,979	272	D	D	101	8	0	1978
75. Commonwealth Mortgage (68) Mortgage banker	2,060	116	10,800	500	C	C	220	20	0	1963
76. Weathervane Window Mfr. wood windows	2,018	115	4,246	200	D	F	75	11	0	1979
77. Hiatt Agency Administers & mkts. insurance programs	2,003	114	2,522	120	D	F	38	6	0	1968
78. Quality Home Insulation (37) Home energy installations	1,994	114	4,720	225	F	A	73	8	1	1976
79. Unified Mortgage (34) Mortgage banking company	1972	113	13,805	666	D	D	169	16	0	1972
80. Microsoft Microcomputer software	1,967	113	50,000	2,418	B	B	342	25	0	1974
81. Computer Dynamics Computer engineering services	1,944	113	3,148	154	B	D	128	8	0	1979
82. Basic Computer Personal-computer sales	1,921	112	12,283	608	D	C	95	5	1	1977
83. Majestic Steel Service Distr. prime sheet & coil products	1,920	112	42,047	2,082	D	D	25	5	0	1979
84. Maxxima Develops & sells computer software	1,916	112	8,651	429	D	C	67	15	1	1977
85. Creative Mgmt. Systems (394/465) Software	1,916	112	2,606	129	A	D	40	7	0	1976
86. Condor D. C. Power Supplies Mfr. electronic subassemblies	1,881	111	10,046	507	D	F	250	18	0	1979
87. Interact Distr. computer products	1,856	110	9,685	495	D	D	43	27	0	1978
88. Kappler Disposables (97) Mfr. disposable industrial clothing	1,839	110	5,836	301	D	F	125	35	0	1976
89. Moss Brown (101) Running & outdoor gear	1,831	110	7,501	388	D	C	57	6	0	1977
90. Allenbach Industries Computer software duplication	1,823	109	3,825	199	F	C	21	4	0	1978
91. Holm Industries Mfr. vinyl, magnetic extrusions	1,818	109	8,439	440	D	F	313	64	0	1978
92. Mariposa Press Heatset web printing	1,743	107	8,038	436	D	F	67	21	0	1978
93. InSpeech (84) Speech & audiology programs	1,685	106	2,285	128	C	C	91	11	0	1978
94. Consolidated Group Administers employee-benefit plans	1,665	105	21,500	1,218	C	D	165	25	0	1971
95. Gulf States Mortgage (283) Mortgage services	1,664	105	5,194	295	C	E	92	9	1	1962

*INC. estimate. A. 16% or more; B. 11% to 15%; C. 6% to 10%; D. 1% to 5%; E. Breakeven; F. Loss.

Company ('83/'82 rank) Business description	Sales growth 1979-83 Percent increase	Compound annual rate	'83 sales ($000)	'79 sales ($000)	Profit range* '83	'79	No. of employees '83	'79	Acquisitions '79-'83	Date founded
96. Insulation Technology Industrial insulation products	1,636	104	2,493	144	B	F	72	9	0	1979
97. Action Packets (92) Distr. gift-shop items	1,630	104	2,140	124	D	D	14	4	0	1976
98. Maxima, The Integrated information tech. service	1,612	103	7,932	463	F	C	250	29	0	1978
99. Administrative Info. Systems (243) Medical software & hardware systems	1,601	103	2,044	120	A	F	14	5	0	1977
100. Weldon Electronics Retail sales of microcomputers	1,584	103	22,266	1,322	D	F	100	7	0	1978
101. Micromedia Marketing (278) Personal computer books & software	1,582	103	5,607	333	D	C	17	4	0	1976
102. Fisher Insurance Group Aviation property & casualty insurance	1,576	102	2,280	136	F	F	9	3	0	1979
103. Jet-Ster SPA manufacturer	1,574	102	2,297	137	C	F	26	12	0	1977
104. HSC Engineering Design consult. engineers & constructors	1,569	102	6,716	402	B	A	76	17	0	1976
105. Videoland Retail TV, video & consumer electronics	1,551	102	32,645	1,977	D	D	299	15	0	1979
106. G&H Transportation Local & interstate common carrier	1,545	101	4,347	264	C	D	25	15	0	1979
107. Carbide Technologies Tungsten carbide products	1,532	101	1,811	111	C	E	30	6	0	1979
108. Pioneer/Eclipse Floor cleaning equip. & chemicals	1,530	101	4,550	279	D	E	40	6	0	1978
109. Mgmt. Consulting & Research Defense consulting	1,526	101	2,027	125	D	C	32	8	0	1977
110. JWI Filtration & process equipment	1,519	101	4,465	276	C	A	37	2	0	1977
111. Metro Information Serv. (216/105) Computer software products & services	1,513	100	1,964	122	C	C	61	2	0	1973
112. Aero Products Distributes emergency medical equip.	1,508	100	3,218	200	D	D	9	1	0	1979
113. Biesemeyer Manufacturing Precision equip. for woodworking indus.	1,492	100	1,774	111	A	A	32	2	0	1978
114. ComDesign (55) Datacommunications equipment	1,491	100	4,185	263	C	F	55	8	0	1977
115. Night Caps Waterbeds & waterbed products	1,487	100	1,680	106	B	D	12	5	1	1979
116. ComputerLand of San Francisco Retail computer stores	1,486	100	10,147	640	C	D	60	12	0	1977
117. Great Lakes Micrographics Specialized photo films; processing labs	1,478	99	3,781	240	C	C	20	6	0	1977
118. Pepperwood International Toy & novelty products, rubber stamps	1,466	99	3,377	216	C	B	126	15	0	1977
119. Oberweis Securities Discount commission stockbrokerage	1,461	99	7,959	510	D	D	100	10	2	1977
120. Harper & Buzinec Architecture & engineering	1,455	99	1,619	104	D	E	45	3	0	1979
121. Burdick's Computer Store (14) Retail computer sales	1,446	98	15,818	1,023	B	C	61	2	0	1978
122. Central Data Mfr. of Multibus board products	1,444	98	4,704	305	D	F	66	13	0	1977
123. Vital Signs (96/54) Anesthesia & respiratory products	1,420	97	8,756	576	D	D	35	10	0	1972
124. Executone of Central Florida Interconnect & health-care comm.	1,418	97	4,261	281	D	C	49	5	0	1969
125. Inmed Medical supplies & industrial gauze	1,411	97	31,217	2,066	D	D	875	25	3	1975
126. CEI Electronic power supplies test equipment	1,409	97	1,517	101	D	E	61	5	0	1977
127. Empire Airways (79) Commuter airline	1,406	97	2,318	154	D	D	30	5	1	1977
128. Hall Real Estate Group (110) Real estate service company	1,404	97	62,063	4,126	A	A	1653	720	1	1969
129. Ugly Duckling Rent-A-Car (183) Used rental car franchising	1,399	97	37,500	2,501	D	D	12	3	0	1978
130. FormStore Business forms	1,383	96	1,490	100	D	F	18	3	0	1979

*INC. estimate. A. 16% or more; B. 11% to 15%; C. 6% to 10%; D. 1% to 5%; E. Breakeven; F. Loss.

	Company ('83/'82 rank) Business description	Sales growth 1979-83 Percent increase	Compound annual rate	'83 sales ($000)	'79 sales ($000)	Profit range* '83	'79	No. of employees '83	'79	Acquisitions '79-'83	Date founded
131.	**Corby Industries** Mfr. digit. access key for secur. indus.	1,376	96	1,801	122	D	C	12	5	0	1975
132.	**U.S. Robotics** Market data communications equipment	1,366	96	6,790	463	A	C	150	6	0	1976
133.	**Hawaiian Pacific Elevator** Elevator contractor	1,347	95	2,404	166	D	D	35	2	0	1977
134.	**Centrac Associates** Architectural/engineering consultants	1,346	95	1,905	132	C	D	41	5	0	1978
135.	**Sidmak Laboratories** OTC & prescription drugs	1,344	95	7,385	511	D	F	82	10	0	1979
136.	**Comsel** Comput. periph. equip. sales, rental, serv.	1,331	95	3,235	226	C	A	13	1	0	1978
137.	**Vanguard Groups International** (45) Real estate syndicator & oil producer	1,324	94	8,172	574	B	B	43	6	0	1978
138.	**Louisiana Energy & Development** Natural gas gathering, trans., distr.	1,316	94	77,396	5,464	D	D	85	32	0	1978
139.	**Thompson** Residential developer/builder	1,307	94	5,845	416	D	D	37	5	0	1979
140.	**Computer Hardware Sales** Buy, sell, lease IBM computer equipment	1,299	93	12,498	893	D	D	12	1	0	1979
141.	**Executone of Western Mass.** Supplies business telecomm. systems	1,295	93	2,570	184	D	F	32	8	0	1978
142.	**Production Management** (116) Oil & gas service	1,289	93	28,137	2,025	D	C	325	75	0	1971
143.	**Byte Shops Northwest** Retail computer sales	1,279	93	8,621	625	D	C	68	10	1	1976
144.	**Nady Systems** (23) Wireless electronics	1278	93	5,610	407	D	D	66	18	0	1977
145.	**Comtex Information Systems** Computer software & consultants	1,278	93	3,609	262	D	E	21	5	0	1978
146.	**RT/Katek** (219 & 102/75) Cable TV install., converter services	1,272	92	17,645	1,286	D	C	285	40	2	1972
147.	**Carl Beavers, Jr. Construction** Residential & commercial construction	1,269	92	1,477	108	B	B	8	1	0	1978
148.	**Mark III Industries** Mfr. RVs & van conversion	1,268	92	71,449	5,224	D	D	209	50	0	1978
149.	**Elographics** (299) Mfr. computer peripherals	1,261	92	3,165	233	A	B	40	8	0	1971
150.	**GNP Loudspeakers** (415) Audio/video computer systems	1,255	92	1,401	103	D	D	9	2	0	1977
151.	**Honolulu Premium Products** Mfr. jewelry	1,248	92	1,540	114	C	C	20	4	0	1979
152.	**Columbia Woodworking** Mfr. custom cabinet, general contracting	1,239	91	4,198	313	D	D	65	10	0	1978
153.	**Productivity Training** Develops management training systems	1,238	91	1,414	106	B	F	9	2	0	1977
154.	**Lender's Service** (129) Mortgage services	1,229	91	16,316	1,228	D	D	301	106	0	1967
155.	**Labelgraphics** Produces pressure-sensitive labels	1,222	91	1,395	106	A	B	20	2	0	1979
156.	**Databank** Retail computer sales	1,209	90	10,934	835	C	E	85	10	0	1978
157.	**Baker Communications** Training & development company	1,208	90	1,635	125	A	E	4	2	0	1979
158.	**Brougher International** (46) Insurance & underwriting mgmt. services	1,207	90	9,449	723	D	A	127	15	2	1972
159.	**Hill International** (62/19) Mgmt. consultants to construction indus.	1,207	90	15,800	1,209	C	C	285	48	3	1976
160.	**Connecticut Radio Network** Media services	1,198	90	1,992	153	D	E	18	5	0	1971
161.	**ATCOM** Telecomm. sales, design, & service	1,197	90	2,078	160	C	F	38	4	0	1979
162.	**Tool King** (231) Specialty retailer	1,196	90	6,549	505	D	E	47	8	0	1978
163.	**Gartner Group** Info. services for high-tech industry	1,196	90	8,850	683	E	F	89	15	0	1979
164.	**Homefinders Rentals** Sells info. on resident. rental vacancies	1,189	89	1,671	130	C	A	24	4	0	1970
165.	**Continental Ozark** Mktg., distribution of petroleum prods.	1,189	89	154,634	12,000	D	D	19	8	0	1977

*INC. estimate. A. 16% or more; B. 11% to 15%; C. 6% to 10%; D. 1% to 5%; E. Breakeven; F. Loss.

	Company ('83/'82 rank) Business description	Sales growth 1979-83 Percent increase	Compound annual rate	'83 sales ($000)	'79 sales ($000)	Profit range* '83	'79	No. of employees '83	'79	Acquisitions '79-'83	Date founded
166.	**Heurikon** (266) Mfr. microcomputer boards & systems	1,188	89	4,029	313	C	A	46	12	0	1972
167.	**Edd Helms** (72) Electrical contracting	1,170	89	12,175	959	D	C	180	35	1	1975
168.	**Vanner** (132) Electronic products	1,169	89	1,588	125	C	C	24	9	1	1977
169.	**SAS Institute** (108/46) Computer software	1,167	89	30,930	2,441	B	B	369	35	0	1976
170.	**Testa Communications** Publishes trade & consumer magazines	1,157	88	2,338	186	D	F	18	4	0	1979
171.	**Information Builders** Proprietory computer software	1,152	88	33,481	2,675	A	A	200	45	0	1975
172.	**Meridian** R&D mgmt. & technical professional svcs.	1,151	88	3,929	314	F	A	70	8	1	1978
173.	**Church Insurance Consultant** (59) Insurance sales	1,150	88	4,245	340	D	F	26	4	1	1977
174.	**Aero Data Metal Crafters** Precision sheet metal parts	1,139	88	1,241	100	D	A	25	4	0	1979
175.	**Den-Mat** Develops dental products	1,138	88	10,197	824	D	D	200	40	0	1968
176.	**Mgmt. Employee Group Admin.** Group insur. & employee benef. admin.	1,134	87	22,115	1,792	D	E	61	8	0	1974
177.	**Contextural Design** Furniture design & manufacturing	1,130	87	2,067	168	D	A	80	10	0	1978
178.	**Fisher Graphic Industries** Mfr. & mkt. flexographic printing plates	1,124	87	1,272	104	D	F	30	8	0	1978
179.	**FKM Copier Products** Sale & svc. of copy machines, supplies	1,119	87	5,036	413	D	B	35	9	1	1979
180.	**TSR** (51/22) Publishes books, games, & accessories	1,105	86	26,705	2,217	F	C	270	29	0	1975
181.	**Peter Piper Pizza** (131) Pizza-restaurant chain	1,098	86	20,617	1,720	C	C	90	50	1	1973
182.	**Office Systems** (433) Computer sales	1,098	86	3,824	319	D	D	36	15	0	1972
183.	**International Medical Centers** Health maintenance organization	1,097	86	72,620	6,066	C	D	600	149	0	1972
184.	**Kidder International** Mfr. waterskis & accessories	1,095	86	2,806	235	D	F	25	5	0	1979
185.	**LaMarca Group** (155/111) Advertising media & marketing services	1,086	86	25,492	2,149	B	B	23	3	0	1975
186.	**Paulsel Lumber** (288) Wholesale lumber & investments	1,085	86	8,219	694	C	A	16	6	0	1945
187.	**Virginia Textiles** (104/83) Imprinted sportswear	1,081	85	7,174	608	D	C	42	17	1	1976
188.	**Comp Fast** Elect. components distrib. businesses	1,080	85	9,295	788	D	E	51	8	1	1977
189.	**Selectone** Tone signaling equipment	1,077	85	2,047	174	D	E	38	8	0	1979
190.	**Ocean Specialty Manufacturing** Mfr. plastic specialty products	1,076	85	2,654	226	D	F	33	15	0	1977
191.	**E&A Industries** (196/41) Mfr. chem., compon. for jet engines	1,067	85	6,681	572	C	C	85	10	1	1977
192.	**Elliott Store Fixtures** Restaurant equipment & supplies	1,062	85	1,452	125	D	E	18	2	1	1945
193.	**Prime Resources** (114) Advertising specialties & premiums	1,055	84	2,079	180	C	C	40	11	1	1978
194.	**Audio Command Systems** (170) Mfr. & install remote control systems	1,048	84	2,010	175	A	E	37	8	1	1978
195.	**Resource Consultants** Professional svcs. to federal government	1,042	84	6,317	553	C	C	120	35	0	1979
196.	**B. W. Levy Security Consultants** (100) Security consulting & services	1,042	84	2,900	254	B	A	160	30	0	1975
197.	**Executone Telecommunications** (245) Telephone systs. sales, installation	1,041	84	3,241	284	F	F	46	6	1	1947
198.	**Jewell Building Systems** (206/175) Mfr. metal prefab buildings	1,041	84	5,029	441	D	F	35	7	0	1977
199.	**Central Mass Media** (139) Publishes regional magazines	1,037	84	1,936	170	D	F	48	8	0	1976
200.	**Diversified Systems** (123) Technical engineering mfg./services	1,026	83	3,253	289	C	B	42	15	0	1973

*INC. estimate. A. 16% or more; B. 11% to 15%; C. 6% to 10%; D. 1% to 5%; E. Breakeven; F. Loss.

	Company ('83/'82 rank) Business description	Sales growth 1979-83 Percent increase	 Compound annual rate	'83 sales ($000)	'79 sales ($000)	Profit range* '83	 '79	No. of employees '83	 '79	Acquisitions '79-'83	Date founded
201.	**Owl Electronic Laboratories** Mfr. microprocessor-based products	1,025	83	1,991	177	D	F	32	8	0	1978
202.	**Image Stream** (107) Audio/visual productions	1,019	83	2,432	217	D	D	20	4	0	1978
203.	**Sunbelt Distributors** Frozen food products	1,017	83	5,620	503	D	D	26	5	0	1977
204.	**Dest** Mfr. automatic document scanners	1,015	83	11,045	991	B	F	84	41	0	1970
205.	**Comark** (42/48) Computer hardware, supplies, access.	1,012	83	6,032	542	D	D	28	5	1	1977
206.	**Hanley-Wood** Publishes magazines	1,007	82	5,933	536	D	C	38	5	2	1976
207.	**Biagge Enterprises** Distr. blank audio, video tapes	991	82	4,457	409	D	D	11	3	0	1977
208.	**R.W. Electronics** Distr. electronic components	989	82	10,684	981	A	A	10	3	3	1979
209.	**Forever Living Products** (6) Mfr. & distributes aloe vera products	976	81	90,400	8,400	D	C	302	7	15	1978
210.	**Miller Medical Service** Supplies medical equip. & supplies	976	81	2,384	222	B	A	47	5	0	1978
211.	**RAIL** (186) Engineering & analytical services	974	81	12,607	1,174	D	E	125	30	0	1970
212.	**Le Beacon Pressé** Who's Who reference directories	968	81	58,000	14,800	A	A	147	114	5	1975
213.	**N. Chosen & Son** Contract furniture dealership	965	81	12,339	1,159	D	D	70	45	0	1914
214.	**Best Choice** (260) Retail & mail-order sporting goods	964	81	1,981	186	D	E	13	5	0	1972
215.	**IMI Systems** Computer systems development	962	81	6,320	595	C	A	130	20	0	1979
216.	**Genie Filter** (274) Designs business machine air filters	962	81	4,338	408	C	B	60	10	1	1973
217.	**Profile Industries** Vertical-blind systems	962	81	4,333	408	F	F	75	30	0	1978
218.	**Nexus** Advertising agency	960	80	1,294	122	B	A	15	4	0	1978
219.	**Conquest Associates** Electronics industry recruitment	960	80	1,314	124	D	F	24	6	0	1979
220.	**Brady Marketing** (138/104) Markets gourmet cookware	953	80	21,050	2,000	C	E	15	4	0	1976
221.	**Custom Van of Utah** Van conversions	947	80	2,588	247	D	D	29	9	0	1976
222.	**Viar** (184) Mgmt. services & software	945	80	11,827	1,132	D	C	63	23	0	1976
223.	**Champion Trophy** Awards, printed apparel & ad. specialties	942	80	1,310	126	C	C	20	3	1	1970
224.	**Zip Products** Mail-order auto parts for old Corvettes	941	80	1,247	120	D	D	8	1	0	1977
225.	**Summa Four** (30) Mfr. microproc.-based telecomm. systs.	936	79	6,399	617	C	F	38	12	0	1976
226.	**Creative Resources** Advertising, design, catalog prod., photo.	934	79	3,822	370	D	C	48	8	0	1978
227.	**Florida Azalea Specialists** Grows azaleas	923	79	1,374	134	C	F	23	5	0	1978
228.	**R. J. Marshall** Mkts. & process. indus. minerals & chem.	921	79	3,421	335	D	D	13	1	0	1978
229.	**Economy Restaurant Equipment** Restaurant equipment & supplies	921	79	1,052	103	C	C	11	1	0	1979
230.	**R&B Automotive** Aftermarket auto mfr. & distributor	920	79	7,936	778	D	D	100	60	0	1978
231.	**Mincron SBC** Software services & package sales	914	78	1,276	126	C	D	32	4	0	1979
232.	**U. A. (Uncle Albert's)** Clothing	912	78	1,706	169	F	D	44	16	0	1978
233.	**Triton** (153) Management consulting	910	78	2,614	259	D	E	40	6	0	1978
234.	**Dilithium Press** (178) Publ. microcomputer books & software	908	78	4,902	486	D	F	37	8	0	1977
235.	**SinBad Sweets** Wholesale bakery	907	78	1,386	138	C	F	20	3	0	1978

500
201
235

*INC. estimate. A: 16% or more; B: 11% to 15%; C: 6% to 10%; D: 1% to 5%; E: Breakeven; F: Loss.

	Company ('83/'82 rank) Business description	Sales growth 1979-83 Percent increase	 Compound annual rate	'83 sales ($000)	'79 sales ($000)	Profit range* '83	 '79	No. of employees '83	 '79	Acquisitions '79-'83	Date founded
236.	**Silberman-Morrow Broadcast.** (13) Owns & operates radio, TV stations	906	78	10,300	1,024	A	C	160	25	9	1978
237.	**R&E Electronics** (386) Communication systems integrator	906	78	1,842	183	D	D	30	8	0	1952
238.	**Marketing Communications** (270) Direct-mail advertising	900	78	9,768	977	B	B	86	30	0	1969
239.	**Kanez** Office automation dealer	898	78	3,192	320	D	C	55	4	0	1978
240.	**TeleCheck Michigan** Check authorization	897	78	1,467	147	C	F	28	10	0	1979
241.	**Systems Coordination** Computer software development	896	78	5,821	585	C	C	120	20	0	1975
242.	**TABS Associates** (182) Presort mail service	888	77	4,641	470	D	D	502	178	1	1977
243.	**National Trade Productions** Marketing firm	888	77	1,784	181	C	D	8	3	0	1976
244.	**Partron Controls** (367/125) Microprocessor programmable controls	877	77	8,838	905	D	C	84	14	0	1975
245.	**Lighting Horizons** Commercial lighting fixtures	873	77	7,250	745	D	D	18	8	0	1978
246.	**Harvin C. Moore** Real estate activities	873	77	74,924	7,702	D	D	150	75	0	1974
247.	**American Technical Serv.** (221/130) Instrument control systems	872	77	30,602	3,147	D	D	400	75	1	1975
248.	**Boston Acoustics** Mfr. home & automobile speakers	871	77	8,559	882	C	D	75	25	0	1979
249.	**Priority 1 Electronics** (31) Computer & electronic components	867	76	20,469	2,117	C	C	105	14	0	1977
250.	**Micro Industries** Manufacturing & engineering services	864	76	2,149	223	F	B	30	6	0	1979
251.	**Aiopec Industries** (194) Mfr. automatic swimming pool cleaner	862	76	16,345	1,699	C	A	72	31	0	1957
252.	**Jackalope Pottery** (329) Retail & wholesale imports	860	76	1,917	200	C	B	28	6	0	1976
253.	**Compendium Systems** Publishes magazines	850	76	7,600	800	A	A	13	7	0	1978
254.	**Metrocall of Delaware** Service & sales of cellular phones	850	76	8,578	903	F	A	87	9	3	1969
255.	**General Communications** (112) Publishes magazines	839	75	1,928	205	C	E	33	8	4	1978
256.	**Zenger Miller** Market management training systems	838	75	7,132	760	C	B	75	10	0	1977
257.	**Aller-Tic** Finance & leasing; mfr. exercise equip.	837	75	9,039	965	C	F	58	10	2	1974
258.	**Vocational Training Center** (418/358) Private trade school	832	75	2,210	237	D	D	90	10	0	1961
259.	**Sybex** (364) Publishes computer books	818	74	10,100	1,100	C	C	110	40	0	1976
260.	**Financial Associates** (181) Marketing brokerage	817	74	8,809	960	A	A	21	4	0	1976
261.	**Yankee Group** (151/70) Market analysis in high technology	817	74	10,100	1,101	A	A	52	12	0	1977
262.	**Tri Glas Industries** (66) Truck & van tops, related accessories	815	74	6,800	743	D	D	197	73	0	1973
263.	**Padgett-Thompson** (144) Business training seminars	808	74	10,958	1,207	A	A	34	7	0	1978
264.	**Support Systems International** (56) Mfr. electronic cable	807	74	2,858	315	C	A	55	14	0	1976
265.	**Motivational Enterprises** Distr. specialty advertising	806	74	1,074	118	D	F	10	2	0	1979
266.	**ZZYZZX Technologies** (49) Commer. construction, genl. contractor	803	73	17,265	1,911	D	E	200	50	0	1976
267.	**Eastern Dental Centers** Mgmt. & delivery of dental-care services	800	73	20,379	2,263	C	C	500	100	6	1976
268.	**UAI Technology** Data mfg. & cash-management services	797	73	2,360	263	D	C	30	5	1	1978
269.	**S. J. Electro Systems** Liquid level controls	791	73	1,109	125	B	B	17	3	0	1975
270.	**RSO** Safety equip. sales to nuclear indus.	788	73	1,820	205	D	F	22	5	0	1974

500
236
270

*INC. estimate. A. 16% or more; B. 11% to 15%; C. 6% to 10%; D. 1% to 5%; E. Breakeven; F. Loss.

	Company ('83/'82 rank) Business description	Sales growth 1979-83 Percent increase	Sales growth 1979-83 Compound annual rate	'83 sales ($000)	'79 sales ($000)	Profit range* '83	Profit range* '79	No. of employees '83	No. of employees '79	Acquisitions '79-'83	Date founded
271.	**Sonic Air Courier** (469/122) Air courier & messenger	787	73	27,804	3,133	C	A	150	95	1	1976
272.	**Dorman Bogdonoff** (268/91) Mfr. flat-panel keyboards	780	72	6,519	741	D	F	172	24	0	1977
273.	**Windham** (253/230) Owns & manages real estate	778	72	39,500	4,500	A	E	750	200	21	1973
274.	**AluChem** Industrial minerals supplier	774	72	4,665	534	D	F	60	12	0	1978
275.	**P E Systems** (89/227) Communications systems	773	72	9,424	1,080	D	C	140	45	0	1971
276.	**Monegon** Renewable energy systems	770	72	3,201	368	D	E	50	20	1	1979
277.	**Mexi-Snax** Mfr. tortilla chips	766	72	984	114	B	E	15	6	0	1977
278.	**Schlott Realtors** Real estate services	766	72	10,500	1,212	B	A	96	19	3	1971
279.	**DLS Industries** (191) Precision metalworking	765	71	13,848	1,601	F	B	275	30	2	1973
280.	**Bruce W. Eberle & Associates** Direct marketing agency	764	71	4,650	538	C	C	130	21	0	1974
281.	**Kelly McK** Mfr. steel fabrication	762	71	1,623	188	B	F	7	3	1	1979
282.	**GAHTS** Wholesaler & retailer of spa equip.	761	71	1,595	185	D	D	12	4	0	1978
283.	**Attridge Heating & Cooling** (237/210) Mfr. evaporative cooling systems	757	71	1,731	202	D	E	14	10	0	1975
284.	**Sage Systems** (390/409) Computer software products	755	71	8,119	950	D	C	130	25	0	1973
285.	**McDonald Equipment** Engines & engine generating sets	752	71	27,063	3,175	D	D	57	18	1	1968
286.	**Futura Coatings** Mfr. industrial coatings	750	71	8,896	1,046	C	C	56	5	1	1979
287.	**Altus** (328) Mfr. batteries & portable power sources	750	71	14,562	1,712	F	F	490	106	2	1976
288.	**Norwich Togs** (370) Mfr. apparel	750	71	4,250	500	D	F	75	50	0	1976
289.	**Sharper Image, The** (76/15) Direct marketing	747	71	69,713	8,228	D	D	180	25	0	1977
290.	**Jeffrey Michael** Mfr. men's apparel	746	71	2,835	335	F	F	35	6	3	1979
291.	**Pressure System** Mfr. electronic instrumentation	740	70	1,708	203	C	C	23	7	0	1977
292.	**Elcomp Systems** Mfr. medical software	737	70	1,212	145	D	A	8	2	0	1978
293.	**Baker Installations** Cable-installation contractor	733	70	2,801	336	C	B	101	12	0	1976
294.	**Swintec** Electronic office products	732	70	14,454	1,738	C	F	26	12	0	1978
295.	**Telecommunications Spec.** (134/82) Rental, sales & service of phone systs.	729	70	18,882	2,277	B	B	217	75	0	1974
296.	**Vantage Computer Systems** Develops & sells computer software	725	70	10,559	1,279	D	F	192	25	0	1970
297.	**Conservatree Paper** (341) Wholesales & distr. recycled paper	721	69	6,205	756	E	F	7	4	0	1977
298.	**Crafco** (463/156) Mfr. pavement-maintenance products	712	69	14,625	1,802	C	C	65	12	0	1976
299.	**North American Financial Serv.** Consulting & data processing services	709	69	7,860	971	D	D	167	27	1	1976
300.	**Saladalley Restaurants** Soup & salad restaurants	706	68	2,263	281	D	D	180	45	0	1978
301.	**Texas Drug Reps** Wholesale distributor of generic drugs	705	68	3,527	438	D	D	16	6	0	1976
302.	**Finals, The** (147/55) Mfr. & distributes swimwear	703	68	6,400	797	C	E	40	5	0	1976
303.	**Indiana Records Managers** (199) Office systems & equipment	701	68	5,004	625	D	D	36	9	1	1976
304.	**Medical Copy Services** Legal service	699	68	1,360	170	B	B	30	5	0	1979
305.	**Amplicon** Leasing	692	68	23,821	3,008	C	C	22	7	0	1977

*INC. estimate. A. 16% or more; B. 11% to 15%; C. 6% to 10%; D. 1% to 5%; E. Breakeven; F. Loss.

	Company ('83/'82 rank) Business description	Sales growth 1979-83 Percent increase	 Compound annual rate	'83 sales ($000)	'79 sales ($000)	Profit range* '83	 '79	No. of employees '83	 '79	Acquisitions '79-'83	Date founded
306.	**Perennial Software Serv.** (472) Microcomputer software services	691	68	2,908	368	B	A	50	3	0	1973
307.	**CEM** (60) Analytical instrumentation biotechnology	691	68	3,001	379	B	C	38	8	0	1971
308.	**Weekley Homes** (173) Residential construction	687	68	53,728	6,824	C	D	74	24	0	1976
309.	**Cooper Consultants** (230) Construction & design mgmt. services	687	68	3,207	407	D	B	75	12	1	1976
310.	**Sunshine Beauty Supplies** (406) Beauty aids	687	68	3,814	484	D	C	62	12	0	1973
311.	**Robelle Industries** (192) Wholesale recreation products	685	67	11,765	1,499	D	D	95	5	4	1976
312.	**Mr. Goodbuys** Retail warehouse stores	685	67	26,208	3,340	C	D	250	25	0	1978
313.	**Psicor** (395/123) Medical services & technology	683	67	10,151	1,296	C	D	99	12	0	1968
314.	**NELCO** Computer broker/dealer/lessor	683	67	5,072	648	C	D	5	1	0	1979
315.	**Travel Center** (267) Retail and wholesale travel services	682	67	72,304	9,241	D	D	360	42	2	1946
316.	**Dr. Cully's Cartage** (275/185) Contract trucking & public warehousing	682	67	3,499	448	F	D	54	13	0	1973
317.	**Marshall Lewis & Associates** IBM computer sales & leasing	682	67	12,435	1,591	C	E	11	3	0	1978
318.	**Equitrac** (50) Computer billing service	679	67	4,299	552	C	D	36	10	0	1977
319.	**Houston Art Glass Enterprises** Dist. stained glass & related supplies	678	67	2,017	259	D	D	11	3	0	1979
320.	**Johnson & Associates** Office furniture dealership	678	67	962	124	F	F	6	2	0	1978
321.	**Merrill** Computer typesetting & finan. printing	678	67	12,948	1,665	C	D	192	43	0	1968
322.	**Megas Manufacturing** (318) Health & beauty products	670	67	9,543	1,240	C	D	105	30	1	1976
323.	**Dynamic Systems** (276) Engineering mgmt. consultants	668	66	5,419	706	D	D	104	20	0	1977
324.	**Oxford Software** (330/203) Computer software development & sales	665	66	10,998	1,437	D	B	110	12	0	1974
325.	**Essex Grain Products** (207) Bakery & food ingredients	664	66	19,400	2,539	D	D	45	6	2	1972
326.	**Electro Mechanical Design** (117) Magnetometers & electric design svcs.	662	66	2,176	285	C	B	61	6	0	1975
327.	**Creel Morrell** Turnkey graphic design services	662	66	1,183	155	C	C	14	3	0	1979
328.	**Starmark** (391) Advertising/marketing	661	66	4,260	560	B	B	19	3	0	1978
329.	**Goal Systems International** Computer software development & sales	660	66	10,232	1,347	A	D	81	17	0	1975
330.	**Duncan Oil** Petroleum prods. wholesaler & retailer	660	66	23,517	3,096	D	D	20	12	0	1955
331.	**Seko Air Freight** (244/99) Domestic & international air freight	659	66	17,968	2,369	D	D	185	22	0	1976
332.	**Golden Gate, Realtors** Real estate investment brokerage	658	66	1,006	133	D	D	10	4	0	1976
333.	**Deucalion Resources Group** Software development	658	66	1,671	221	B	F	12	3	0	1978
334.	**Cormed** (204/187) Mfr. & mkt. medical devices	654	66	2,807	372	D	C	20	2	0	1976
335.	**Campmor** (91) Camping mail order company	652	66	8,350	1,110	D	E	65	10	0	1978
336.	**D P Enterprises** Distr. IBM computer prods.	649	65	30,109	4,019	C	B	194	60	5	1970
337.	**Construction Systems** Turnkey CAD & project mgmt. systs.	647	65	1,128	151	D	F	30	6	0	1976
338.	**Flexible Packaging** (340) Mfr. polyurethane & corrugated boxes	647	65	3,026	405	D	A	40	30	1	1977
339.	**Slotline Golf** Premium golf clubs	647	65	2,737	366	D	E	19	5	0	1975
340.	**Yantis** Contractor	641	65	4,388	592	C	C	59	29	0	1975

*INC. estimate. A. 16% or more; B. 11% to 15%; C. 6% to 10%; D. 1% to 5%; E. Breakeven; F. Loss.

Company ('83/'82 rank) Business description	Sales growth 1979-83 Percent increase	Compound annual rate	'83 sales ($000)	'79 sales ($000)	Profit range* '83	'79	No. of employees '83	'79	Acquisitions '79-'83	Date founded
341. Motivational Marketing Sales & marketing consulting	641	65	1,000	135	A	A	19	2	0	1978
342. Booth Organization (488) Building maintenance	639	65	2,342	317	B	A	346	68	0	1977
343. ETM Electromatic Test equip. for traveling wave tubes	638	65	3,334	452	D	F	75	14	0	1973
344. Words & Data Advertising agency	637	65	904	123	B	E	2	1	0	1977
345. Swimex Swimming-pool & spa equipment	631	64	3,261	446	D	D	10	2	0	1976
346. Proforma Business forms & office products	629	64	1,982	272	D	B	14	3	0	1978
347. Techne Electronics Vehicle security systems	627	64	1,600	220	E	E	25	5	0	1972
348. Advanced System Applications (297) Software development & remote services	627	64	14,475	1,991	C	D	332	38	0	1977
349. Kiwi Fence Systems Distr. agricultural fencing & trellising	622	64	1,027	142	D	D	9	4	0	1978
350. XTO Distr. flex. nonmetallic mater.	621	64	2,053	285	E	F	19	8	0	1978
351. Computer Science Press (272/196) Publishes text & reference books	619	64	1,932	269	D	D	14	5	0	1974
352. Peak Technical Services Contract engineering service	617	64	8,090	1,128	D	F	146	73	0	1972
353. Polycom Compounders of thermo plastics	614	63	13,799	1,932	D	F	86	27	1	1977
354. W-B Supply (384/31) Oil-field products	610	63	34,803	4,903	D	D	77	23	0	1971
355. BEI Holdings (188/69) Consulting within financial industry	609	63	8,854	1,249	B	B	110	12	2	1976
356. Scipar (308) Electro-optics R&D	609	63	2,408	340	D	C	29	6	0	1975
357. Neutron Industries (106) Maintenance products	606	63	1,766	250	F	F	40	13	0	1978
358. JBM Electronics (385) Mfr. electronic communication equip.	605	63	2,110	299	A	C	51	13	0	1975
359. Allegro Services (236/195) Mfr. & distr. fund-raising merchandise	604	63	10,398	1,477	D	D	85	25	0	1975
360. Lawson Associates (310/38) Computer software	603	63	5,796	824	D	E	104	24	0	1975
361. Scientific Calculations Develops & mkt. turnkey computer systs.	599	63	34,232	4,899	C	D	360	50	0	1963
362. Vanguard Plastics Tubing for hot & cold water plumbing	599	63	8,116	1,162	D	F	61	21	0	1977
363. United Design (197) Mfr. giftware figures	593	62	1,667	240	D	B	65	10	0	1975
364. Komfort Koach (468) Van & specialty vehicle conversions	591	62	9,593	1,389	D	D	120	35	0	1975
365. Leichtung (358/233) Mail-order catalog	590	62	16,998	2,463	C	C	75	20	0	1974
366. Setpoint (324/282) Eng. computer control applications	589	62	8,477	1,230	D	C	85	31	0	1977
367. Eastway Delivery Service Delivery service	588	62	4,167	605	D	F	73	8	3	1977
368. Fortuna Apparel chain	588	62	16,800	2,441	D	D	290	175	0	1961
369. Imahara & Keep Advertising & public relations	588	62	16,266	2,364	A	A	15	6	0	1979
370. Noel Joanna (133) Soft goods for infants	588	62	6,609	961	D	D	61	22	0	1970
371. Pacific Envelope (381/229) Mfr. & prints envelopes	587	62	4,266	621	D	D	32	8	1	1959
372. Heritage Insurance Assoc. Insurance agency	587	62	703	102	D	C	4	2	0	1979
373. Wesmac Computer Systems Computer retailer	586	62	2,415	352	D	F	9	2	0	1978
374. Cisco Electrical Supply Electrical distributor	584	62	2,418	353	E	E	8	1	0	1978
375. CTEC (171/446) Mfr. chair lifts	583	62	5,697	834	D	D	131	12	0	1976

*INC. estimate. A. 16% or more; B. 11% to 15%; C. 6% to 10%; D. 1% to 5%; E. Breakeven; F. Loss.

Company ('83/'82 rank) Business description	Sales growth 1979-83 Percent increase	Compound annual rate	'83 sales ($000)	'79 sales ($000)	Profit range* '83	'79	No. of employees '83	'79	Acquisitions '79-'83	Date founded
376. Geo-Centers (455) High-tech research & development	583	62	2,875	421	D	D	50	9	0	1973
377. Brad Cable Electronics (140) Mfr., sales, svc. of cable TV components	582	62	4,617	677	B	C	135	34	0	1977
378. Seneca Balance (480/416) HVAC test & balance	582	62	3,750	550	A	B	50	15	2	1979
379. Interval International Vacation-exchange organization	582	62	7,782	1,141	D	D	138	60	1	1976
380. Software Results (136) Datacomm. firmware develop. & sales	581	62	3,204	470	C	C	29	10	0	1975
381. PCI Computer trade publications	579	61	1,297	191	B	A	18	1	0	1979
382. Salazar Construction General contractor	576	61	7,438	1,101	D	C	150	20	0	1960
383. Sierra Geophysics Exploration software	575	61	3,054	452	C	C	20	7	0	1978
384. Graphco Graphics	574	61	1,785	265	C	F	42	18	0	1976
385. Markatron (95) Mfr. trademarked collectibles	574	61	2,736	406	D	D	15	3	0	1978
386. Genesee Stampings Metal stampings	574	61	2,813	418	C	C	35	7	0	1978
387. Sport Graphics (220) Mfr. sport bags	571	61	5,050	752	C	D	65	45	0	1977
388. HHB-Softron Software products & services	566	61	4,486	673	D	B	60	15	1	1977
389. Endless Vacation Systems (282) Vacation exchange & travel services	565	61	16,800	2,525	E	D	330	74	0	1974
390. Associated Packaging (137) Packaging equipment & material	565	61	7,032	1,057	D	D	25	6	1	1977
391. Rising Fast Trucking Long-haul trucking	565	61	6,194	932	F	F	110	20	0	1979
392. San Antonio Developers (322) Specialty coatings	564	61	1,776	267	C	C	6	4	1	1977
393. Siegel-Ruggiero Design Graphics Advertising agency	563	60	1,825	276	B	E	14	8	2	1977
394. Skyway Freight Systems (446) Freight & computer services	561	60	9,864	1,492	D	D	80	20	0	1977
395. ZBR Publications Graphic art, typeset., print., binding	559	60	6,911	1,049	D	F	100	34	1	1978
396. Tek-Aids Industries (35) Microprocessors, software & peripher.	557	60	15,641	2,379	D	D	75	7	3	1974
397. Alacon General contractor	557	60	34,794	5,293	D	F	50	36	0	1964
398. Eterna-Line Specialty contractor	554	60	2,733	418	D	D	12	4	0	1972
399. Arcon Develops & mfr. medical products	552	60	931	143	C	C	23	11	0	1979
400. Wild & Wooly Needlecrafts Retail needlecrafts chain	551	60	2,897	445	D	D	30	18	0	1975
401. Avtec Industries TV facilities, computer networking	548	60	2,985	461	D	D	28	10	0	1978
402. Payday Payroll data processing	545	59	1,008	156	D	C	27	5	0	1975
403. American Passage Marketing (152/95) Photo finishing & marketing	543	59	6,651	1,034	D	F	116	30	0	197
404. Garey Construction Excavation & paving contractors	541	59	4,954	773	C	F	45	12	0	1977
405. Effective Management Systems (28) Software developer, computer systems	540	59	4,903	766	D	C	50	11	0	1978
406. Advanced Computer Communications Mfr. computer comm. equip. & software	540	59	10,638	1,663	C	C	135	33	0	1975
407. Intertec Components (303) Electronic products	540	59	2,723	426	D	C	15	6	0	1976
408. Metroweb Prints magazines	539	59	4,393	687	D	E	62	14	0	1977
409. IPL Commercial printers	539	59	1,518	238	B	F	25	5	0	1979
410. Ad-Tek Engineering Services (362/71) Provides temp. technical personnel	537	59	4,149	651	D	D	71	20	0	1974

*INC. estimate. A. 16% or more; B. 11% to 15%; C. 5% to 10%; D. 1% to 5%; E. Breakeven; F. Loss.

	Company ('83/'82 rank) Business description	Sales growth 1979-83 Percent increase	 Compound annual rate	'83 sales ($000)	'79 sales ($000)	Profit range* '83	 '79	No. of employees '83	 '79	Acquisitions '79-'83	Date founded
411.	**Cibcoa** Consumer electronics	536	59	38,142	6,000	D	D	110	35	2	1964
412.	**PNS** Packing & shipping locations	535	59	1,855	292	F	F	6	4	0	1976
413.	**Petroleum Well Services** (127) Oil & gas services	533	59	6,089	961	E	B	89	40	1	1977
414.	**Klutz** (491) Publishes trade books	533	59	1,212	191	A	C	4	3	0	1977
415.	**Webb, Murray & Associates** (382/169) Fire protection & safety engineering	532	59	3,042	481	D	E	53	12	0	1975
416.	**Environmental Resources Mgmt.** (88) Environmental consulting engineers	530	58	6,775	1,075	C	B	62	16	0	1977
417.	**Harmony Foods** (346/92) Natural snacks & confectionery	530	58	28,601	4,538	D	D	225	50	0	1969
418.	**Gila Medical Services** Full-benefit, prepaid health plan	522	58	2,229	358	E	C	24	12	0	1959
419.	**Systems Architects** (347/256) Computer systems software	522	58	12,021	1,931	F	D	319	64	0	1970
420.	**Environmental Marketing Group** Environ. prod. sales, construct. & svc.	522	58	2,939	473	D	B	9	3	0	1977
421.	**Ostarr** (451) Mfr. concrete repair products	521	58	758	122	D	F	6	2	1	1978
422.	**Technology Constructors** (168) General contractor	521	58	1,145	184	D	A	50	4	0	1978
423.	**Visible Changes** (54) Chain of haircutting salons	518	58	9,122	1,476	B	B	305	100	0	1977
424.	**L/F Technologies** (487) Mfr. microcomputer systems	518	58	20,777	3,363	A	B	131	36	0	1976
425.	**Delta Business Systems** (122/21) Sell & lease office products	517	58	11,739	1,902	C	C	225	35	0	1976
426.	**Systems & Applied Sciences** Computer software & systems	517	58	35,453	5,747	D	C	850	200	0	1973
427.	**T. J. Mac Dermott** Dining service mgmt.	517	58	6,420	1,041	D	D	150	40	0	1978
428.	**Littlewood, Shain** (86) Financial consulting & software sales	516	58	2,881	468	E	C	52	10	0	1977
429.	**Parmed Pharmaceuticals** (290) Distributes generic pharmaceuticals	515	57	6,994	1,137	D	D	66	17	0	1968
430.	**Drug Emporium** Retail drugstore chain; franchiser	515	57	34,311	5,583	D	D	148	20	1	1977
431.	**Comsearch** (77/160) Engineering svcs. for telecomm. users	514	57	5,875	957	A	A	60	18	0	1977
432.	**Advanced Technology** (176/34) High-tech professional services	511	57	58,607	9,589	D	D	1149	330	0	1976
433.	**Euro Rep** (273) Import & distr. of auto accessories	511	57	989	162	D	E	5	2	0	1979
434.	**NEOPC** (179/176) Natural foods	510	57	6,100	1,000	D	D	29	8	0	1977
435.	**Allied Tire Sales** Retail tire sales	509	57	24,117	3,960	D	D	275	100	0	1976
436.	**Brooks International** Delivery service, interstate	507	57	9,127	1,503	C	D	228	110	2	1972
437.	**Astro Automotive** Sales of auto parts, service	507	57	1,518	250	D	F	30	7	3	1972
438.	**Lost Arrow** Mfr. retail outdoor clothing & equip.	507	57	16,380	2,700	D	D	105	40	0	1972
439.	**Lufran** (359) Mfr. product. equip. for semiconductor	505	57	2,832	468	B	B	46	20	0	1974
440.	**Associated Images** Media design & production	501	57	643	107	C	F	10	4	0	1976
441.	**TeleCheck Southwest** (252/52) Check & credit-card authorization	498	56	6,455	1,080	D	D	102	43	0	1977
442.	**Qualogy** Computer peripherals	497	56	27,827	4,659	C	C	244	38	0	1967
443.	**Collier-Jackson** (450) Software house	496	56	6,857	1,151	B	D	83	29	0	1975
444.	**Healthcare International** Hospital management	495	56	62,289	10,469	D	D	1700	800	7	1979
445.	**National Computer Print** Loan payment coupon books	494	56	11,578	1,949	B	A	160	50	1	1974

*INC. estimate. A. 16% or more; B. 11% to 15%; C. 6% to 10%; D. 1% to 5%; E. Breakeven; F. Loss.

Company ('83/'82 rank) Business description	Sales growth 1979-83 Percent increase	Compound annual rate	'83 sales ($000)	'79 sales ($000)	Profit range* '83	'79	No. of employees '83	'79	Acquisitions '79-'83	Date founded
446. **Computer Maintenance** (251) Services mini/microcomputers	494	56	4,612	776	D	D	51	39	0	1977
447. **National Title** Insurance agency	494	56	2,022	341	A	D	24	14	1	1978
448. **D&D Services** (177/134) Service contractor	491	56	3,312	561	C	C	300	131	0	1975
449. **Advanced Circuit Technology** Printed circuits & interconnect devices	483	55	4,269	732	C	F	111	30	0	1976
450. **Easy Living** Sells furn. appliances, TVs, audio equip.	482	55	17,295	2,972	D	D	300	40	0	1968
451. **Spectra Research Systems** Instrumentation R&D	482	55	6,297	1,082	D	D	90	27	0	1970
452. **Computer Avionics** Mfr. custom thick film hybrids	482	55	1,458	251	C	F	50	6	0	1975
453. **Gordon S. Black** Market research	481	55	1,523	262	D	B	20	4	0	1975
454. **Par Label & Tape** Pressure-sensitive labels	481	55	2,790	480	D	D	24	8	0	1975
455. **Winona Knitting Mills** (375) Retail clothing	480	55	11,793	2,035	D	D	125	50	0	1976
456. **Roberts Welding Contractors** Industrial contracting	479	55	855	148	B	B	50	8	0	1977
457. **PCI Energy Services** (248) Services nuclear power plants	475	55	16,085	2,795	B	B	160	25	0	1971
458. **Memphis Glove** (169/77) Mfr. & imports work gloves	475	55	16,750	2,911	D	D	34	7	0	1974
459. **Alimar et Cie** (225) Wine importer & marketer	471	55	1,618	284	B	C	25	2	0	1977
460. **Pacific Trade Group** Book & gift distributors, publishers	470	55	2,101	369	D	C	12	2	2	1977
461. **Aquidneck Data** (351/39) Computer software & systs. engineering	469	54	8,753	1,540	D	C	204	56	0	1976
462. **General Alum & Chemical** Chemical producer of aluminum sulfate	468	54	3,732	657	D	D	25	10	1	1978
463. **Systems Strategies** (277/102) Commercial automated systems design	468	54	7,384	1,300	D	B	115	55	0	1976
464. **Contract Furnish. & Systs.** (356/186) Office furniture dealer	467	54	16,894	2,980	A	A	83	16	2	1978
465. **N.C.O. Industries** Mfr. rigid polyurethane foam	466	54	6,038	1,067	D	D	10	5	0	1978
466. **Erection Specialties** Specialty contractors	466	54	3,519	622	C	C	47	16	0	1974
467. **Baker Concrete Construction** Concrete construction contractor	463	54	27,875	4,954	D	C	480	250	0	1969
468. **International Metric Supply** Distr. auto fasteners, supplies, tools	462	54	6,603	1,176	C	F	100	25	0	1977
469. **Miller Oil** (432/336) Petroleum distributor	461	54	28,900	5,147	D	D	141	34	6	1977
470. **Straub Metal Service** Steel warehousing & mfr.'s agency	460	54	1,400	250	C	D	5	2	0	1979
471. **Sunwestern Properties** Commercial real estate developer	460	54	1,504	269	B	B	20	7	1	1977
472. **Western Controls** (410) Electrical distributor	459	54	1,353	242	D	D	8	3	0	1977
473. **Hidden Villa Ranch** (306) Wholesale distributor of eggs & cheese	459	54	9,508	1,700	E	D	35	5	0	1977
474. **Corporex** Real estate; general contracting	459	54	41,443	7,413	D	C	95	40	0	1965
475. **Alltest** Mfr. auto diagnostic equipment	456	54	2,668	480	B	F	15	16	0	1974
476. **Transpo Electronics** Mfr. electron. compon. to auto aftermkt.	454	53	4,961	895	C	C	72	33	0	1978
477. **Nacom** Contractor, cable TV industry	453	53	11,034	1,995	C	C	66	9	0	1978
478. **Telco Research** (218) Telecomm. software & consulting	452	53	3,491	632	A	C	45	11	0	1977
479. **American Agrisurance** (167) Crop insurance	452	53	24,300	4,400	D	D	33	6	1	1977
480. **Sun Hill Industries** (175/29) Mfr. holiday & stationery supplies	452	53	7,174	1,299	D	C	38	10	0	1974

500
446
480

*INC. estimate. A. 16% or more; B. 11% to 15%; C. 6% to 10%; D. 1% to 5%; E. Breakeven; F. Loss.

	Company ('83/'82 rank) Business description	Sales growth 1979-83 Percent increase	Sales growth 1979-83 Compound annual rate	'83 sales ($000)	'79 sales ($000)	Profit range* '83	Profit range* '79	No. of employees '83	No. of employees '79	Acquisitions '79-'83	Date founded
481.	**Peerless Umbrella** Mfr. umbrellas	452	53	2,302	417	C	C	30	15	0	1929
482.	**Corporate Consulting & Devel.**(259) Consulting engineering	452	53	2,809	509	C	D	51	23	0	1972
483.	**Protec Management System** (226) Security & management control systems	450	53	1,181	215	B	D	19	4	0	1977
484.	**Marine Structural Applications** (255) Marine contracting	450	53	6,517	1,185	D	C	60	12	0	1978
485.	**Thermal Engineering of Arizona** Heat recovery units	447	53	2,086	381	D	D	19	3	0	1977
486.	**Pretty Neat Industries** (407/199) Cosmetic organizers	446	53	6,775	1,241	D	D	150	20	0	1977
487.	**Hermens Air** Scheduled airline & air taxi	444	53	1,539	283	C	C	22	6	0	1974
488.	**MD Resources** Recruits physicians	443	53	766	141	C	B	15	4	0	1979
489.	**Seavex** (478/308) Publishing & advertising sales rep firm	443	53	1,318	243	C	D	12	3	0	1977
490.	**Cablevision Industries** Cable TV services	440	52	22,496	4,162	F	B	293	137	7	1956
491.	**Incepts** Software consulting & product develop.	440	52	1,642	304	C	A	26	6	0	1979
492.	**Sundown Vitamins** (48) Mail-order & wholesale nutrition	439	52	11,116	2,064	C	C	75	12	0	1976
493.	**Professional Bank Services** Financial consultants	438	52	1,175	218	D	C	17	5	1	1978
494.	**Dayton Extruded Plastics** Mfr. custom extrusions	438	52	5,536	1,029	C	D	40	35	1	1969
495.	**Integral Systems** (345) Application software	438	52	8,603	1,600	D	E	100	35	1	1972
496.	**Oil Recovery Systems** Pumping systems & consulting svcs.	435	52	6,274	1,173	C	C	76	30	1	1975
497.	**Brum & Anderson Public Relations** Public relations & marketing communic.	435	52	847	158	E	A	35	5	1	1978
498.	**Sun Circuits** Printed circuit boards	434	52	1,473	276	D	D	24	8	0	1974
499.	**Uniq Digital Technologies** (214) Computer systems development	434	52	4,575	858	F	C	40	14	0	1975
500.	**GPA Technical Consultants** Engineering & design consultants	432	52	5,854	1,100	D	D	220	57	1	1979

500
481
500

HOW THE INC. 500 WERE SELECTED

The 1984 INC. 500 is the third annual ranking of the 500 fastest-growing privately held smaller businesses in the United States. To be included on the list, each company had to meet the following qualifications:

1. The company is an independent, privately held corporation, proprietorship, or partnership.

2. The company shows a sales history of at least five years. Companies founded after 1979 were excluded.

3. Sales in 1979 were at least $100,000 but less than $25 million.

4. The company's 1983 sales exceeded its 1982 sales. Companies showing growth in the five-year period, but a sales decline in 1983, were excluded.

While the criteria were relatively simple, the task of identifying the 500 finalists was complex, both because of the numbers of companies involved and because the project depended on information that is generally regarded as confidential.

INC. estimates that the total universe of potential candidates exceeds 500,000 companies. The research relied on two primary sources: INC. readers and in-house records. In addition, business groups, trade associations, and professional service firms were alerted to the search for high-growth companies by letter, advertisements, and personal contact.

Advertisement and business reply cards inserted in the April, May, and June issues invited readers to nominate candidates for the INC. 500. Drawing on the publication's national circulation of more than 550,000, the cards generated over 5,000 entries from April 1 to July 31.

INC.'s in-house database was screened to produce an additional 2,000 candidates, and another 1,500 names were added from directories and editorial files.

At the beginning of May, data forms were sent to 8,500 company executives. About 2,000 responses were received by the deadline of August 15. From those responses, more than 700 smaller, privately owned companies whose sales had at least quadrupled in the past five years were identified and ranked by percentage gain in sales.

Information on these companies as well as companies from last year's list was then verified through signed statements from company officers, support material from outside professionals, and telephone interviews with executives of each company. The published information is the only material that INC. will make available.

The list of INC. 500 companies was compiled by senior research editor Elyse Friedman, researcher/reporter Donna Fenn, and interviewers William Kilbourne III, Lucinda Sholley, Bradford W. Ketchum III, and H. David Richards.

*INC. estimate. A. 16% or more; B. 11% to 15%; C. 6% to 10%; D. 1% to 5%; E. Breakeven; F. Loss.

C468 7

THE MAGAZINE FOR GROWING COMPANIES

Inc.®

IN SEARCH OF EQUITY

This ~~man's~~ your best young manager. Your company depends on him. Now he wants more than a paycheck....

Why "JUST IN TIM
may be too so
for some executiv

**PERSONA
BUSINES**

The crucial decis
most service compan
never ma

CONTENTS

31 *Matters of Fact: David Birch casts new light on some old assumptions.*

103 *Profit and Loss: Xaloy workers weren't sure about Just-in-Time.*

51 *In Search of Equity: Employees want a piece of the action.*

7 **FYI**
Wet paint

10 **Letters**
On ownership and justice; doing well by doing good; but what if the bankers don't get it?

15 **News & trends**
A tiny state leads the way; mobile messages; LBO craze; deterring lawsuits; entrepreneurial farmers; book battle

Washington
23 **How I know my ABCs**
By Steve Coll
The president of the American Business Conference would have us think that the organization represents the elite of America's growth companies. Think again.

Face-to-Face
31 **Matters of fact**
In 1979, David Birch shattered the prevailing wisdom about job creation. Now he's at it again. An interview.

INC. Cover Story
51 **In search of equity**
By Bruce G. Posner
The passion for ownership is sweeping the country, touching most every industry and company.

68 **Personal business**
By Tom Richman
Founders of professional service firms must make a choice: Do they want to *be* the company, or build one?

78 **Profile of a compulsive entrepreneur**
By Joseph P. Kahn
To Wilson Harrell, business is just one adventure after another.

92 **Playing for position**
By Regis McKenna
Silicon Valley's best-known marketeer tells how he goes about creating a marketing plan.

103 **Profit and loss**
By Craig R. Waters
For the traditional manager, "Just-in-Time" may be too soon. Just ask the people at Xaloy.

118 **Spotlight**
A new wrinkle; forecasting a profit; garage sales; closed for business

145 **Hands on: a manager's notebook**
Incentive plans aid motivation; states get into the venture capital business; guaranteed ad campaigns; reselling companies' mistakes

COPYRIGHT © 1985 BY INC. PUBLISHING CORPORATION All rights reserved. Editorial and executive offices at 38 Commercial Wharf, Boston, MA 02110. INC. (ISSN 0162-8968) is published monthly by Inc. Publishing Corporation, 1642 Westwood Blvd., Los Angeles, CA 90024. Subscription rate for U.S. and Possessions, 12 issues $24. All subscription correspondence should be addressed to INC. magazine, P.O. Box 2538, Boulder, CO 80322. Please allow at least six weeks for change of address. Include your old address as well as new, and enclose if possible an address label from a recent issue. Second class postage paid at Los Angeles, Calif., and additional mailing offices. Postage paid at Mississauga, Ontario. POSTMASTER: Send address changes to INC. magazine, P.O. Box 2538, Boulder, CO 80322. Material in this publication must not be stored or reproduced in any form without permission. Requests for permission should be directed to Permissions Coordinator, INC., 38 Commercial Wharf, Boston, MA 02110. Inc. is a registered trademark of Inc. Publishing Corporation.

VOL 7. NO. 4

Cort Wells Brown

68 *Personal Business: John Brockman never intended to build a company.*

Managing people

155 **An offer they couldn't refuse**
Work force getting old? Productivity down? Try the early-retirement solution.

Selling & Marketing

156 **Not quite ready for prime-time president**
CEOs are taking to the airwaves to pitch their company's products or services.

Capital

160 **Paper route**
One lender finds a way to open the commercial paper market to small companies.

Financial tactics

165 **Everybody into the pool**
Companies may soon be selling more partnerships to R&D pools than to individual investors.

168 **Investing in growth companies/Street talk**
A speculative bull carries stocks higher.

171 **Your money**
Health care stocks; helping the kids to buy a house

Cover photo
Clint Clemens

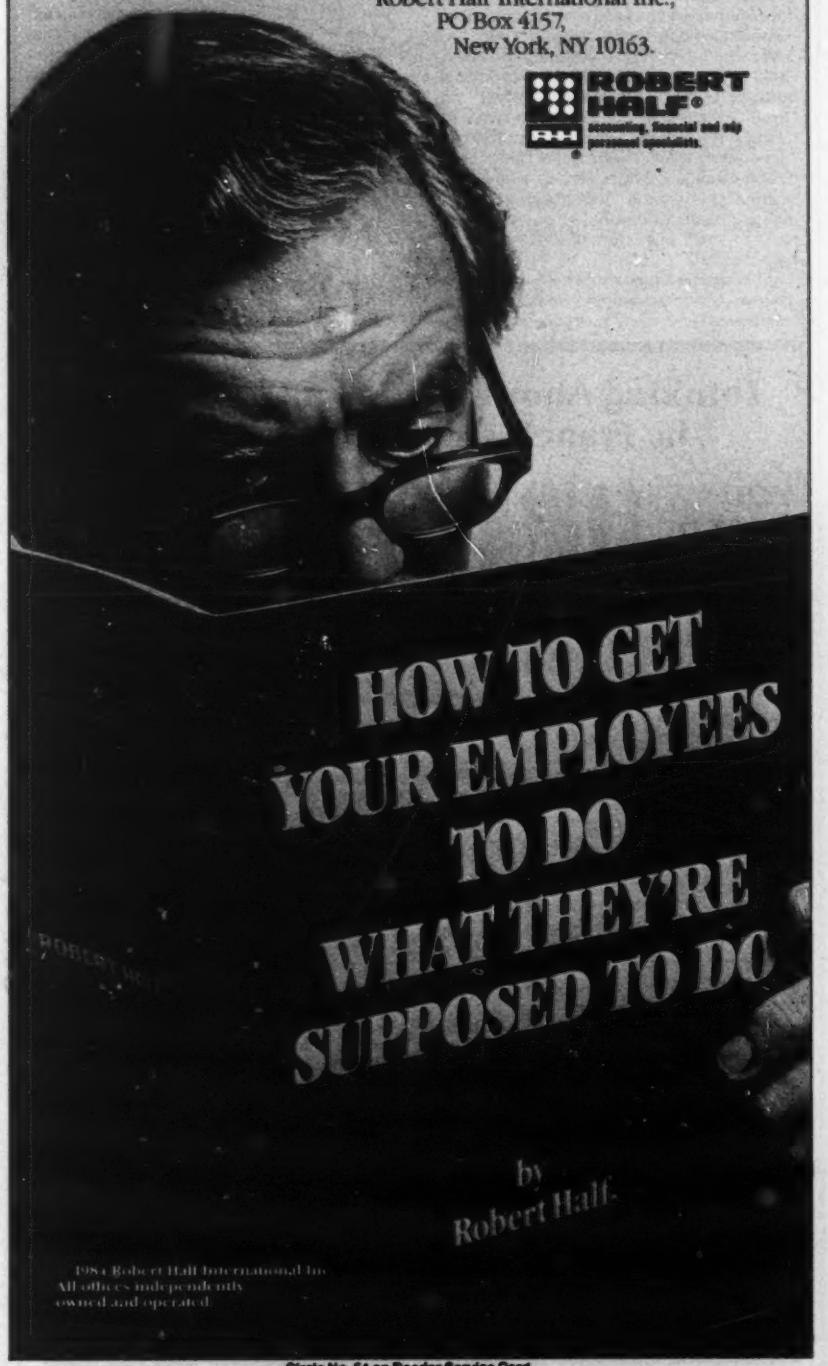
Yours free.

This valuable booklet contains many practical tips—some will almost certainly improve productivity in your company. It's published by Robert Half, the world's largest recruiting service specializing in financial, accounting and data processing professionals.

To get your copy, contact any of the 80 Robert Half offices on three continents. Or, write on your company letterhead to:

Robert Half International Inc.,
PO Box 4157,
New York, NY 10163.

ROBERT HALF®
accounting, financial and edp personnel specialists.



©1984 Robert Half International Inc.
All offices independently owned and operated.

Circle No. 54 on Reader Service Card.

WILL THE SON ALSO RISE?

It was a great romance, while it lasted: Wall Street and the leveraged buyout. Now the two are giving birth to their own mini-phenomenon. According to investment banker Glenn Golenberg, "son of LBO" is on its way.

Like many of his colleagues, Golenberg has been deluged with LBO proposals in recent years. Most have been overpriced, undercapitalized, or generally ill-conceived, he says. In an LBO, a management group puts up a small amount of money, using the company's future earnings and assets as collateral to borrow funds to buy the company. One of the biggest LBOs was the buyout of City Investing Co. for around $1.3 billion. "The euphoria of the phenomenon in the past few years caused banks to lend too much money," says Golenberg. "A lot of unqualified people were getting deals done, and now the companies aren't performing as well as expected."

Saddled with debt, many such companies will raise cash by spinning off a unit through another LBO, Golenberg predicts. "We're finding a lot of LBOs that want to talk about selling divisions," he says. "It will become a very significant niche"—one that he hopes his new limited partnership, Golenberg Capital Associates, will occupy. "There is an active, but quiet, market for it," concurs Leigh Trevor, a partner in Jones, Day, Reavis & Pogue, a law firm specializing in LBOs. Trevor says that certain LBOs are "engaging in partial liquidations in order to pay for the debt they've incurred."

But not all observers think that "son of LBO" will grow much once it is out of the delivery room. "It's really a small fraction of the market," says Victor A. Ptak, a partner in J. C. Bradford & Co., a Nashville-based investment banking firm. "Very few investment bankers have the talent, time, and temperament to do it."

—Joshua Hyatt

HOT SPOTS

TINY CONNECTICUT LEADS IN RETAIL SALES GROWTH

What are the fastest-growing retail markets around? New York? Houston? Phoenix? Surprise—none of them even makes the top 10. The hottest retail market these days is Hartford, the bustling insurance center. Hartford has plenty of fierce competition in its own backyard: New Haven and Fairfield County, Conn., occupy top slots, probably benefiting from the exodus of executives and big companies leaving the Big Apple.

From the looks of sales figures compiled by *Adweek* magazine, the aisles in many cities are jammed with engineers. High-tech centers—Boston, San Francisco, San Jose, Calif., and a few cities in North Carolina—were among those that have posted impressive retail sales gains. Not so for the Sunbelt, where it seems to be hotter outside than it is indoors. Nonetheless, here are the top 10: *—J.H.*

Geographic area	1982–'83 increase in retail sales	1983 retail sales ($000)
1. Hartford	22.2%	$ 6,351
2. New Haven	21.5	4,290
3. Fairfield County, Conn.	21.2	5,578
4. Providence	20.2	4,500
5. Raleigh Durham, N.C.	19.6	3,185
6. San Jose, Calif.	17.8	9,469
7. Greensboro Winston-Salem, N.C.	16.7	4,818
8. San Francisco	14.9	10,721
9. Boston	14.8	22,191
10. Bergen County, N.J.	14.6	8,478

BOOK BATTLE

David and Goliath are hurling books at each other in the hushed aisles of your public library.

David is Richard D. Smith, who sees a big business opportunity in the millions of books that are crumbling because of damage caused by acid in the paper. Smith, a librarian and engineer, spent 20 years developing a nonaqueous liquid process to deacidify books. In 1972, he founded Wei T'o Associates Inc., of Matteson, Ill. (Wei T'o is the ancient Chinese god who protects books.) The Public Archives of Canada and the National Library of Canada have treated 20,000 books with the Wei T'o process since 1981—a pilot program that accounted for a significant portion of the company's $250,000 in sales last year.

The good news for Smith is that he has only one competitor he views as a serious threat. The bad news is that his competitor is the Library of Congress, which is probably the most influential force in the library world. The library developed its own process with public funds and will build a $11.5-million plant to treat a million volumes a year. Smith says comparable Wei T'o equipment would cost $1 million, mostly because it doesn't require a special facility to isolate toxic and explosively flammable chemicals. "In a fair competition, they wouldn't have the chance of a snowball in hell," he says.

Smith is more gentlemanly in academic journals, where the debate goes on oh so politely. But he knows it could be disastrous for him if the library licenses its own system, which it says is superior. "If you argue with the Library of Congress, it's almost like you're arguing with God Himself," explains Smith, who adds that three organizations are considering a Wei T'o facility.

"They may be winning a few battles, but they're not winning the war," Smith says. "I don't see any reason for an individual to back off from taking on groups in Washington just because they have access to the federal treasury." *—V.I.*

VIVE L'ENTREPRENEUR

"Forty years ago, people didn't know what an entrepreneur was. They thought it was a person living in France."

Donald Rappaport
National Director of Smaller Business Services
Price Waterhouse

Choosing the right health care stocks

Ways to help your child buy a house

YOUR MONEY

Edited by John Case

HEALTH CARE STOCKS: "90% CONFUSION AND 10% OPPORTUNITY"

If you think *your* business has been buffeted by the winds of change, consider what is happening in the health care industry:

☐ New technological developments are turning up faster than in any other field, except possibly computers. They run the gamut from futuristic gene-splicing techniques—still mostly in experimental stages—to sophisticated diagnostic and therapeutic equipment.

☐ Health services are being delivered in new ways, often by new companies. Some 150 young, health-related companies went public in the last year and a half alone. About a quarter of these are firms that operate freestanding health care centers—medical, optical, dental, and so on. "That's up from zero a few years ago," points out Jules Marx, an industry specialist with Whale Securities Inc., based in New York City.

☐ The federal government—which picks up the tab for 30% of the nation's total health bill—has recently instituted a series of cost-cutting policies that fundamentally change the economics of the business. The Medicare system, for instance, has established standard treatment costs for 468 "diagnostic-related groups" (DRGs) of illnesses and disorders. If a hospital's costs for treating a patient with a given illness are above the DRG average, Medicare won't pay the overrun. If the costs are below the average, though, the hospital gets to keep the difference. The implication: There is a new emphasis on cost containment, efficient operation, and less-expensive technology.

All of this is quite a change from the system of the past 10 years, when health care delivery was dominated by big nonprofit hospitals with about as much interest in cost cutting as in yesterday's newspaper. And the changes undoubtedly open up investment opportunities. The difficulty lies in figuring out where the openings might be.

"Right now," says Paul W. Brown, a medical devices analyst with Hambrecht & Quist Inc., in San Francisco, "I'd say there is 90% confusion and 10% opportunity. In a year, that ratio should change to 70% confusion and 30% opportunity." Meanwhile, says Brown, investors would do well to study how various kinds of companies have done in the recent past, and what trends and pressures they will be facing in the future.

Service companies. Some 40% of all health care expenditures go to cover hospital costs, and big for-profit hospital chains, such as Humana Inc., are growing at rates as high as 25% a year. With the advent of cost containment, both they and the nonprofits are likely customers for companies offering hospital information systems. The top two companies in this field, says Bama Rucker, another Hambrecht & Quist analyst, are Shared Medical Systems Corp. and HBO & Co. Shared Medical reported 1984 sales figures of $256.8 million, while HBO came in at $88.7 million. Among their strong points, Rucker says, "both have a national sales force, a large hospital client base, and the money for R&D."

Much of the growth in health care services is taking place outside of hospitals. Health maintenance organizations (HMOs), for example, now number some 340, up from a mere 30 only 15 years ago, and such big publicly owned chains as Maxicare, U.S. Health Care Systems, and HealthAmerica are all well over $100 million in revenues. But analysts tend to agree that HMO stocks, which soared in 1984, aren't bargains in 1985. Of greater potential interest to investors are the smaller, newer companies that operate a variety of installations. Jim Hoover, who tracks health care stocks for Robertson, Colman & Stephens in New York City,

Illustrations by Elizabeth Slote

likes Mediplex, a Massachusetts company that operates eight nursing homes, three alcohol- and substance-abuse centers, and a building-development division. Mediplex went public in the fall of 1983 at 15; in February the stock was over 29.

Medical equipment. "Hospitals are not just cutting back on diagnostic machinery," says William J. Hayes, portfolio manager of Fidelity Investments' Select Health Care Fund, "but on everything from bedpans to needles." In such an atmosphere, investing in a company that manufactures expensive new equipment can be a chancy proposition. By the same token, though, new technologies that promise to shorten hospital stays or otherwise reduce costs are good bets for the future.

Lasers, says Whale Securities' Marx, are an example of a technology that fits in the latter category. Lasers are already well established in ophthalmology, and are just beginning to make headway in other areas. A company called Lasermed Inc., for instance, produces laser-based surgical equipment for physicians' offices, taking the technology out of the hospital entirely. The company is likely to turn a profit this year, Marx believes.

Another set of companies that may benefit from the current climate are those in the growing market for home health care. Two of the major players are Baxter-Travenol Home Therapy Group and Home Health Care of America Inc., which is the one pure play in this field. Both companies hold a 15% to 18% share of the home infusion-therapy market; that is, the market for home-based infusion of nutrients, antibiotics, or toxic chemicals for use in chemotherapy.

Home infusion therapy can lead to cost savings of from 50% to 80% for patients who use it; even so, according to Rucker, "The newness of the industry and the newness of cost data have kept the government from reaching a standard national rate for reimbursement." Government cost cutters want to get patients out of the hospital and into the home, she says, but worry that home infusion could produce another financial dilemma like kidney dialysis, in which the bill shot from $229 million to $2 billion in 10 years.

Biotechnology. The potential of gene-splicing and similar technologies is broad: Marketable products may one day range from medical diagnostic tools to shampoos. But the key word is potential; many biotech companies haven't even begun to live up to their promise. Biogen, the well-known genetic engineering company founded by Nobel laureate Walter Gilbert, for instance, didn't have the business acumen to match its scientific talent. "Biogen had difficulty identifying unique products," says Misha Petkevich, technology analyst with Hambrecht & Quist in New York City. "And it's very difficult to move ahead in biotechnology without a unique product."

Today, there are about 50 public biotech companies, many of them wholly unscrutinized by Wall Street analysts. Not all are primarily concerned with medical applications, but those that are focus on monoclonal antibodies, recombinant DNA, or both.

The key word in the biotechnology field is potential, because many biotech companies haven't even begun to live up to their promise.

Monoclonal antibodies make diagnostic tests more accurate, and are used in research geared toward treating cancer and infectious diseases. Hybritech Inc., analysts say, is one company that is establishing itself as a leader in the field, notably with its pregnancy and colo-rectal cancer diagnostic products. Hybritech is also using monoclonal antibodies for in vivo imaging of cancer tumors. Petkevich expects the company to remain profitable this year, and thinks that more than 50% of its 1985 revenues will be attributable to product sales. In biotechnology, that is a healthy level.

Recombinant DNA—a fancy term for gene-splicing—allows scientists to transfer a gene from one organism to another. Genentech Inc., the acknowledged leader in this field, isolated the genetic code for human insulin, and was then able to produce insulin biologically. Genentech's gamma interferon is in human clinical trials, as is its so-called tPA (tissue plasmigen activator, an aid to the body in breaking up blood clots). Petkevich expects 50% of Genentech's 1986 revenues to come from sales as it begins a rapid rollout of products, including a human-growth hormone.

Jim McCamant, editor of *Medical Technology Stock Letter*, says that the biggest mistake health care investors often make is paying too much. "They look at what the company is doing, not at its price," says McCamant. "It is so easy to get excited about a company in an exciting business that investors will buy the stock at any price." An example cited by McCamant is Diasonics Inc., a medical diagnostic imaging company. Diasonics went public at 22 and then shot up to 30. Recently it was selling at around 3. "Investors thought it was such a good company that it could do no wrong," recalls McCamant. "But it tried to grow too fast and just couldn't make it."

—Lisa R. Sheeran

YOUR MONEY (continued)

The Five Best-Performing Health Care Stocks for 1984*

Company	Business	% Increase
STAAR Surgical	R&D of intraocular lenses	+700%
Medical Sterilization	Contract sterilization of medical products	+315
Exovir	R&D of skin disease treatments	+254
NMR of America	Freestanding magnetic imaging centers	+215
Healthcare Services Group	Maintenance to nursing homes	+191

The Five Worst-Performing Health Care Stocks for 1984*

Company	Business	% Decrease
Healthdyne Inc.	Electronic pediatric equipment	–85%
Quality Systems	Hospital information systems	–83
Doctors Officenters	Freestanding emergency centers	–76
Braintech	Computer mapping of brain electrical activity	–75
Togo	Manufactures immunologic reagents and diagnostic test kits	–75

Source: Whale Securities Inc. *January 1 to December 31